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DOMESTIC MEDICINE;

OR,

THE FAMILY PHYSICIAN.

In ſome Editions of this Work, a very long Liſt of Medicines, Simple and Compound, is annexed, ſaid to be proper to be kept in private Families, for occaſional uſe.

In the preſent Edition this Liſt is omitted, becauſe it may not be without danger to intruſt any conſiderable quantity of Medicines into the hands of perſons who are not competent judges of their nature and properties: And beſides, before any great portion of them can be uſed, they may be in ſuch a ſtate of decay, as to render them not only uſeleſs, but highly injurious.—The Medicines recommended in the Work may be had, when wanted, at any Laboratory or Apothecary's Shop, in a freſh ſtate, and may be uſed with ſafety.

Edinburgh, *April* 8. 1802.

DOMESTIC MEDICINE;

OR,

THE FAMILY PHYSICIAN;

BEING

AN ATTEMPT TO RENDER THE MEDICAL ART MORE GENERALLY USEFUL,

BY

SHEWING PEOPLE WHAT IS IN THEIR OWN POWER, BOTH WITH RESPECT TO THE PREVENTION AND CURE OF DISEASES.

CHIEFLY CALCULATED

TO RECOMMEND A PROPER ATTENTION TO

REGIMEN & SIMPLE MEDICINES.

By WILLIAM BUCHAN, M. D.

WITH NOTES AND LARGE ADDITIONS,

BY A MEDICAL GENTLEMAN.

Sed valetudo ſuſtentatur notitia ſui corporis; et obſervatione, quæ res aut prodeſſe ſoleant, aut obeſſe; et continentia in victu omni atque cultu, corporis tuendi cauſa; et prætermittendis voluptatibus; poſtremo, arte eorum quorum ad ſcientiam hæc pertinent.

CIC. DE OFFIC.

EDINBURGH:

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ADVERTISEMENT

BY THE PUBLISHER.

TO ſay any thing of the merit of the Original Work, which has ſo long been ſanctioned by the approbation of the Public, and which, ſince its firſt appearance in 1769, has undergone no leſs than *ſixteen* new editions, (the laſt ſo lately as 1798), the Publiſher flatters himſelf is *now* unneceſſary, and, in his opinion, would be impertinent. He has therefore to ſtate the claims of the *preſent edition only* to public favour.

When the Publiſher, on the expiry of the Copy-right of the Original Work, which took place in 1798, had come to a reſolution of preſenting the Public with a new edition, he at the ſame time determined, that no pains or expence ſhould be ſpared to render that edition in ſome meaſure worthy of its approbation. For this purpoſe he engaged a Medical Gentleman, on whoſe honour and abilities he could perfectly depend, to make ſuch additions and corrections as, in his opinion, the Work would admit. Theſe have partly been thrown to the bottom of the page, in the form of notes; partly, where the ſubject was entirely new, retained in the body of the Work, as text. Beſide a variety of additional obſervations on many of thoſe contained

tained in the former Work, a number of ſubjects, entirely new, are here introduced; with a complete Treatiſe on Lues Venerea and Gonorrhœa Virulenta, under all their various forms: likewiſe *Diſſertations*, on *Suſpended Animation* from drowning, hanging, ſuffocation, from noxious vapours, cold, profuſe bleeding, &c. on *Blood-letting*, *Inflammation*, *Diſlocations*, *Fractures*, &c. the uſe of the *Cold Bath*, the *different Mineral Waters*, with *ſome Obſervations* on *Diet*, chiefly with a view to œconomy therein, in the preſent ſcarcity of proviſions, and ſome advice to the lower claſſes on that ſubject. Throughout the *whole*, the *Original* is preſerved *entire and unmutilated*, as well out of reſpect to the Work itſelf, as from a due deference in this matter to the opinion of the Public.

Upon the whole, the Publiſher's endeavour in this new edition, has been, to render the Work more extenſively uſeful, by embracing a great variety of ſubjects, as well as more generally ſafe, by pointing out ſuch errors and deficiences in the former Work, as were likely to be of worſt conſequence, and which, in a greater or ſmaller degree, muſt ever attach to all human performances. How far he has ſucceeded, does not belong to him, but to the Public, to decide, to whoſe arbitration he chearfully ſubmits.

AUTHOR'S ADVERTISEMENT.

IT is aſtoniſhing, after Medicine has been ſo long cultivated as a liberal art, that philoſophers and men of ſenſe ſhould ſtill queſtion whether it be more beneficial or hurtful to mankind. This doubt could never take its riſe from the nature of medicine, but from the manner in which it has been conducted.

All ages and nations have agreed in thinking that the ſick ought to be treated in a manner different from thoſe in health. Indeed the very appetites of the ſick ſhew the neceſſity of, at leaſt, a different regimen. So far medicine is evidently founded in nature, and is quite conſiſtent with reaſon and common ſenſe.

Had phyſicians been more attentive to *regimen*, and leſs ſolicitous in hunting after wonderful medicines, and concealing their pretended virtues from the reſt of mankind, the medical art would never have become an object of ridicule. The affectation of myſtery may, for a while, draw the admiration of the multitude, but will never ſecure the eſteem of men of ſenſe; and it will always occaſion ſuſpicions in the minds of the more enlightened part of mankind.

Every attempt, therefore, to monopoliſe or conceal any thing that relates to the preſervation of health or the cure of diſeaſes, muſt not only be injurious to the intereſts of ſociety, but likewiſe to the medical art: If medicine be a rational ſcience, and founded in nature, it will never loſe its reputation by being expoſed to public view. If it be not able to bear the light, it is high time that it were exploded.

Secrecy, in any art, lays a foundation for impoſition. Had phyſicians never affected myſtery, quacks and quackery could never have exiſted. Now that they have over-run all Europe, and diſgraced both nature and the medical profeſſion, there is no other method of diſcrediting them with the people, but a total reverſe of behaviour in the Faculty

Faculty. Let us therefore act with candour, openneſs, and ingenuity, and mankind will ſoon learn to dread every thing in medicine that has the ſmalleſt appearance of ſecrecy or diſguiſe.

The affectation of myſtery not only renders the medical art more liable to be abuſed, but likewiſe retards its progreſs. No art ever arrived at any conſiderable degree of improvement, ſo long as it was kept in the hands of a few who practiſed it as a trade. The intereſted views of a trade will always obſtruct the progreſs of a ſcience. Other arts have been diffuſed among the people, have become the objects of general attention, and have been improven accordingly. Medicine ſtill continues a myſtery. Even the philoſopher is not aſhamed that he is ignorant of the cauſes and cure of diſeaſes. Hence it is, that while other branches of ſcience have arrived at a high degree of perfection, the healing art is ſtill involved in doubt and uncertainty.

Thoſe who follow the beaten tract of a teacher, ſeldom make any uſeful diſcoveries. Accordingly we find, that moſt of the real improvements in medicine have either been the effect of chance, or have been made by perſons not bred to phyſic. Men who think and reaſon for themſelves, who are not fettered by theories, nor warpt by hypotheſes, bid the faireſt for improving any art.

As all men are liable to diſeaſe, and equally intereſted in every thing relating to health, it is certainly the duty of phyſicians to ſhew them what is in their own power, both with reſpect to the cure of the one, and the preſervation of the other. Did men take every method to avoid diſeaſes, they would ſeldom need the phyſician; and would they do what is in their own power when ſick, there would be little occaſion for medicine. It is hard to ſay if more lives are not loſt by people truſting to medicine, and neglecting their own endeavours, than all that are ſaved by the help of phyſic.

We do not mean that all men are to be made phyſicians. This, according to the preſent acceptation of the word, would be an attempt as ridiculous as it is impoſſible. We only mean that they ſhould be taught the importance of due *care* for the preſervation of health, and of a proper

regimen

regimen in diſeaſes. Theſe they are certainly capable of underſtanding, and all the reſt is of ſmall account.

We are happy to find, that ſome of the moſt eminent phyſicians now begin to entertain more liberal ideas with regard to phyſic. Van Swieten *, Roſen †, Tiſſot, and ſome others, have written with a view of diffuſing ſome knowledge of medicine among the people. Their performances have met with that applauſe from the public, which it is always ready to beſtow on works of real utility. Had Tiſſot's plan been more extenſive, the following pages would probably never have been made public. He confines himſelf ſolely to the acute diſeaſes. We have likewiſe treated the chronic; both becauſe they are very frequent in this country, and becauſe the cure of them chiefly depends on a proper regimen.

Dr Tiſſot has alſo treated the prophylaxis, or preventive part of medicine, leſs minutely than ſeems neceſſary. A very ſlight inquiry into the cauſes of popular maladies is ſufficient to ſhew that many of them might, by due care, be prevented. For this reaſon, a conſiderable number of the following pages are employed in pointing out the moſt common cauſes of popular diſeaſes, and the means of avoiding them.

The firſt part of the prophylaxis is calculated to ſhew the importance of proper nurſing ‡. The obſervations were made in a ſituation where the author had the greateſt opportunities of ſeeing the effects both of the right and wrong management of children, and of being fully convinced that the latter is the principal cauſe of their great mortality.

Peculiar attention is paid to the diſeaſes of mechanics. That uſeful ſet of people, upon whom the riches and proſperity of Britain depend, can never be too much regarded. Their valuable lives are frequently loſt for want of due attention

* Phyſician to their Imperial Majeſties.

† Firſt phyſician of the kingdom of Sweden.

‡ Moſt of the obſervations contained in the firſt chapter were made in the Foundling Hoſpital at Ackworth, and communicated to the public ſeveral years ago, in a pamphlet addreſſed to the governors of that hoſpital.

attention to circumſtances, which, both to themſelves and others, may often appear trifling.

We have likewiſe endeavoured to point out the bad effects of luxury, indolence, &c. All men acknowledge health to be the chief bleſſing of life; but few ſhew a proper concern for the preſervation of it. There is hardly any pleaſure or profit for which people will not hazard their health; and it is often bartered for the moſt fordid enjoyments. Few things, however, are more in their own power. Moſt men may enjoy health if they will. Even thoſe who have had the misfortune to be naturally of a weak conſtitution, have often, by proper care, arrived at an extreme old age, and enjoyed good health to the very laſt; while ſuch as were naturally robuſt, by truſting too much to their ſtrength of conſtitution, and deſpiſing care, have either died young, or dragged out a life of pain and miſery.

In the treatment of diſeaſes, we have been chiefly attentive to diet, drink, air, and the other parts of regimen. Regimen ſeems to have been the chief, if not the only medicine of the more early ages, and, to ſay the truth, it is the moſt valuable part of medicine ſtill. But regimen and domeſtic medicines are deſpiſed, while foreign regions are ranſacked for things of leſs value, and every ore which the earth affords is tortured to extract poiſons, and arm the daring empyric for the deſtruction of his fellow-men.

We have indeed ventured to recommend ſome ſimple medicines in almoſt every diſeaſe; but even theſe ſhould only be adminiſtered by people of better underſtanding. We would have the ignorant omit them altogether, and attend ſolely to the directions relating to diet and the other parts of regimen.

The laudable diſpoſition which ſo univerſally prevails among the better ſort of people in the country, of aſſiſting their poor neighbours in diſtreſs, ſuggeſted the firſt hint of this attempt. It never was, and, in all probability, never will be, in the power of one half of mankind to obtain the aſſiſtance of phyſicians. What muſt they do? To truſt themſelves in the hands of quacks, or blunder on in the track which their rude foreſathers pointed out, are perhaps equally dangerous. The ignorant ruſtic puts little confidence

confidence in any endeavours of his own. All his hopes of a cure are placed in something which he does not underſtand; ſomething myſterious, and quite above his capacity, as herbs gathered under the influence of ſome planet, charms, the noſtrums of quacks and conjurers, &c. Such are the ridiculous and deſtructive prejudices which prevail among the inhabitants of this country, even in this enlightened age; and ſuch is their entire ignorance of medicine, that they become the eaſy dupes of every pretender to it.

We make no doubt but the ladies, gentlemen, and clergy, who reſide in the country, will readily concur with us in endeavouring to root out ſuch pernicious and deſtructive prejudices. Their example will have great weight with their dependents and inferiors; and their advice will be often liſtened to with more attention than that of a phyſician. They will teach the poor the importance of a proper regimen, both in health and ſickneſs; the danger of truſting their lives in the hands of quacks and conjurors, and the folly of their own ſuperſtitious notions. By this means they may prevent much evil, do ſome good, and prove real bleſſings to thoſe among whom they reſide.

Nothing is farther from the deſign of the following pages, than to induce ignorant perſons to tamper with dangerous medicines, or truſt to their own ſkill, where better aſſiſtance can be obtained. But where ſomething muſt be done, and no medical aſſiſtance can be had, it is certainly better to direct people what they ought to do, than to leave them to blunder on in the dark.

There is no doubt but the more mercenary part of the Faculty, whoſe ideas of medicine never riſe above the ſordid views of a trade, will do all in their power to diſcredit every attempt of this kind with the public. With ſuch as are able to ſee through the diſguiſe, their cenſure will paſs for applauſe; and with the leſs enlightened, it will be little regarded. With us it can have no weight, ſo long as we are conſcious that we have the good of mankind at heart; and that, however imperfect the execution may be, the deſign has been approven by many whoſe names do honour to the medical profeſſion.

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PART I.

OF PREVENTING DISEASES.

CHAP. I.

OF CHILDREN.

TO avoid diſeaſes, it is neceſſary we ſhould know their cauſes. Theſe indeed are numerous; but we ſhall endeavour to point out ſuch only as have the moſt general influence, as too great minuteneſs in this reſpect would tend rather to perplex than inſtruct the generality of readers.

The better to trace diſeaſes from their original cauſes, we ſhall take a view of the common treatment of mankind in the ſtate of infancy. In this period of our lives, the foundations of a good or bad conſtitution are generally laid; it is therefore of importance, that parents be well acquainted with the various cauſes which may produce diſeaſes in their offspring. It muſt be owing either to the ignorance or careleſſneſs of parents, that ſo many of the human ſpecies periſh in infancy. This, we preſume, will appear from the following obſervations.

The annual regiſters of the dead ſhew, that at leaſt one half of the children born in Great Britain die under twelve years of age. To thoſe who do not reflect, this appears to be a natural evil, and therefore they think it their duty to ſubmit to it. But whoever accurately examines the matter, will find that it is an evil of our own making, and, in a great meaſure, owing to miſmanagement. Were the death of infants a natural evil, other animals ſhould be as liable to die young as man; but that we ſee is not the caſe.

It may ſeem ſtrange, that man, notwithſtanding his ſuperior reaſon, ſhould fall ſo far ſhort of other animals in the management of his young: But our ſurpriſe will ſoon ceaſe, if we conſider, that brutes, guided by inſtinct, never err in this reſpect; while man, truſting ſolely to art, is ſeldom right. Were a catalogue of thoſe children who periſh annually by art alone exhibited to public view, it would aſtoniſh moſt people.

When parents are above taking care of their children, others muſt be employed for that purpoſe: Theſe will always endeavour to recommend themſelves by the appearance of extraordinary ſkill and addreſs. By this means ſo many unneceſſary and deſtructive articles have been introduced into the diet, clothing, &c. of children, that it is no wonder ſo many of them periſh.

Nothing can be more prepoſterous than for a mother to think it below her to take care of her own child, or to be ſo ignorant as not to know what is proper to be done for it. If we ſearch nature throughout, we cannot find a parallel to this. Every other creature is the nurſe of its own young, and they thrive accordingly. Were the young of brutes to be brought up by proxy, they would ſhare the ſame fate with thoſe of the human ſpecies.

We mean not to impoſe it as a taſk upon every mother

mother to ſuckle her own child. This, whatever ſpeculative writers may ſay to the contrary, is in many caſes impracticable, and would inevitably prove deſtructive both to the mother and child. Women of delicate conſtitutions, ſubject to low ſpirits, hyſteric fits, or other nervous diſorders, make very bad nurſes: But theſe complaints are now ſo common, that it is rare to find a woman of faſhion free from them; for which cauſe few women of better ſtation, ſuppoſe them willing, are really able to ſuckle their own children.

Did mankind live as nature directs, almoſt every mother would be in a condition to give ſuck: But, whoever conſiders how far we have deviated from her dictates, will not be ſurpriſed to find many of them unable to perform that neceſſary office. Mothers who do not eat enough of ſolid food, nor enjoy the benefit of free air and exerciſe, can neither have wholeſome humours themſelves, nor afford proper nouriſhment to an infant. Children who are ſuckled by delicate women, either die young, or are weak and ſickly all their lives. Nor is this at all to be wondered at. If children ſuck in nervous diſeaſes with their mother's milk, what have we to expect?

When we ſay, that every mother is not able to ſuckle her own child, we would not be underſtood as diſcouraging that practice. Every mother who can, ought certainly to perform that tender office*. But ſuppoſe it to be out of her power, ſhe may, nevertheleſs, be of great ſervice to her child. The buſineſs of nurſing is by no means confined to

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* Nor would the advantages attending this practice be confined to individuals; they would extend to ſociety at large, who loſe many that would have been uſeful members, by that inhuman practice among the lower claſſes, of giving away, to thoſe who are either unfit or have not time to diſcharge the office faithfully, their own children to nurſe, that they may get a little money by taking in thoſe of other people.

giving ſuck. To a woman who abounds with milk, this is the eaſieſt part of it. Numberleſs other offices are neceſſary for a child, which the mother at leaſt ought to ſee done. A mother, who abandons the fruit of her womb, as ſoon as it is born, to the ſole care of an hireling, hardly deſerves that name. A child, by being brought up under the mother's eye, not only ſecures her affection, but may reap all the advantages of a mother's care, though it be ſuckled by another. How can a mother be better employed, than in ſuperintending the nurſery? This is at once the moſt delightful and important office! yet the moſt trivial buſineſs or inſipid amuſements are often preferred to it: A ſtrong proof both of the bad taſte and wrong education of modern females.

It is much to be regretted, that more pains is not beſtowed in teaching the proper management of children to thoſe whom nature has deſigned for mothers. This, inſtead of being made the principal, is ſeldom conſidered as any part of female education. Is it any wonder, when females, ſo educated, come to be mothers, that they ſhould be quite ignorant of the duties belonging to that ſtation? However ſtrange it may ſeem, it is certainly true, that many mothers, and thoſe of faſhion too, are as ignorant, when they have brought a child into the world, of what is proper to be done for it, as the infant itſelf. Indeed, the moſt ignorant part of the ſex are generally reckoned moſt knowing in the buſineſs of nurſing. Hence, ſenſible people become the dupes of ignorance and ſuperſtition; and the nurſing of children, inſtead of being conducted by reaſon, is the reſult of whim and caprice.

One great deſign of females, no doubt, is to propagate the ſpecies. But to bring forth a child, is the leaſt part of that important buſineſs. Were

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the care of a parent to ſtop here, the whole human race would ſoon be extinct. Nature has made it neceſſary, that a child ſhould depend on its parents during the ſtate of infancy; and thoſe parents who neglect the proper care of their offspring, not only violate one of the firſt and ſtrongeſt principles of nature, but actually endeavour to extinguiſh the human race. An infant may be as certainly murdered by neglect, as by any act of violence whatever; and for one child that loſes its life by the latter, a thouſand periſh by the former, without being regarded.

Were the time that is generally ſpent by females in acquiring uſeleſs knowledge, employed in learning how to bring up their children; how to dreſs them ſo as not to hurt, cramp, or confine their motions; how to feed them with wholeſome and nouriſhing food; how to exerciſe their tender bodies, ſo as beſt to promote their growth and ſtrength: Were theſe the objects of female inſtruction, mankind would derive the greateſt advantages from it. But, while the education of females implies little more than what relates to dreſs and public ſhow, we have nothing to expect from them but ignorance, even in the moſt important concerns. But ignorance can be no excuſe, where people have it in their power to be better informed; and, if children periſh by the negligence of mothers, the mothers muſt be accountable.

Did mothers know their importance, and lay it to heart, they would embrace every opportunity of informing themſelves of the duties which they owe to their infant offspring. It belongs to them, not only to form the body, but alſo to give the mind its moſt early caſt. They have it very much in their power to make men healthy or valetudinary, uſeful in life, or the bane of ſociety.

But the mother is not the only perſon concerned

in the management of children. The father has an equal intereſt in their welfare, and ought to aſſiſt in every thing that reſpects either the improvement of the body or mind.

It is a pity that men pay ſo little regard to this matter. Their neglect is one reaſon why females know ſo little of it. Women will ever be deſirous to excel in ſuch accompliſhments as recommend them to the other ſex. But men generally keep at ſuch a diſtance from even the ſmalleſt acquaintance with the affairs of the nurſery, that many would eſteem it an affront, were they ſuppoſed to know any thing of it. Not ſo, however, with the kennel or the ſtables: A gentleman of the firſt rank is not aſhamed to give directions concerning the management of his dogs or horſes; but would bluſh were he to be ſurpriſed in performing the ſame office for that being who derived its exiſtence from himſelf, who is the heir of his fortunes, and the future hope of his country. Few fathers indeed run any hazard of being ſurpriſed in this ſituation; yet, certain it is, that man needs culture more than any other creature, and that both his body and mind are capable of the greateſt improvement. Nature has left ſo much in the power of parents, that children are, in a great meaſure, what they pleaſe to make them.

Phyſicians themſelves have not been ſufficiently attentive to the management of children: That has been generally conſidered as the ſole province of old women, while men of the firſt rank in phyſic have even refuſed to viſit infants when ſick. Such conduct in the Faculty has not only cauſed this branch of Medicine to be neglected, but has alſo encouraged the other ſex to aſſume an abſolute title to preſcribe for children in the moſt dangerous diſeaſes. The conſequence is, that a phyſician is ſeldom called till the good women have exhauſted

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all their ſkill; when his attendance can only ſerve to divide the blame, and appeaſe the diſconſolate parents.

We would have nurſes do all in their power to prevent diſeaſes; but, when a child is taken ill, ſome perſon of ſkill ſhould immediately be conſulted. The diſeaſes of children are generally acute, and the leaſt delay is dangerous.

Were phyſicians more attentive to the diſeaſes of children, they would not only be better qualified to treat them properly when ſick, but likewiſe to give uſeful directions for their management when well. The diſeaſes of children are by no means ſuch a difficult ſtudy as many imagine. It is true, children cannot tell their complaints; but the cauſes of them may be pretty certainly diſcovered, by putting proper queſtions to the nurſes and ſuch as are about them. Beſides, the diſeaſes of infants, being leſs complicated, are eaſier cured than thoſe of adults.

It is really aſtoniſhing, that ſo little attention ſhould in general be paid to the preſervation of infant-lives! What labour and expence are daily beſtowed to prop an old rotten carcaſe for a few years, while thouſands of thoſe who might be uſeful in life periſh without being regarded, and prove no better than an untimely birth! Mankind are apt to value things, not according to their future, but their preſent utility. This is of all others the moſt erroneous method of eſtimation; yet, upon no other principle is it poſſible to account for the general indifference with reſpect to the death of infants.

OF DISEASED PARENTS.

Diseased parents cannot beget healthy children. It would be as reaſonable to expect a rich crop

from a barren ſoil, as that ſtrong and healthy children ſhould be born of delicate parents, worn out with intemperance or diſeaſe.

An ingenious writer obſerves *, that on the conſtitution of mothers depends originally that of their offſpring. No one who believes this will be ſurpriſed, on a view of the female world, to find diſeaſes and death ſo frequent among children. A delicate female brought up within doors, an utter ſtranger to exerciſe and open air who lives on tea and other ſlops. may bring a child into the world, but it will hardly be fit to live. The firſt blaſt of a diſeaſe will nip the tender plant in the bud: Or, ſhould it ſtruggle through a few years exiſtence, its feeble frame, ſhook with convulſions from every trivial cauſe, would be unable to ſuſtain the common functions of life, and prove a burden to ſociety.

If, to the delicacy of mothers, we add the irregular lives of fathers, we ſhall ſee further cauſe to believe, that children are often hurt by the conſtitution of their parents. A ſickly frame may be originally induced by hardſhips or intemperance, but chiefly by the latter. It is impoſſible that a courſe of vice ſhould not ſpoil the beſt conſtitution: And did the evil terminate here, it would be a juſt puniſhment for the folly of the ſufferer; but when once a diſtemper is contracted and rivetted in the habit, it is entailed on all poſterity. What a dreadful inheritance is the gout, or the king's-evil, to tranſmit to our offspring! How happy had it been for the heir of many a great eſtate had he been born a beggar, rather than to inherit his father 's fortunes at the expence of likewiſe inheriting his diſeaſes!

No perſon who labours under any incurable ma-

lady

* Rouſſeau.

lady ought to marry, as he thereby both ſhortens his own life and tranſmits miſery to others: But when both parties are deeply tainted with the ſcrophula, the ſcurvy, or the like, the effects muſt be ſtill worſe. Such will either have no iſſue at all, or thoſe whom they have muſt be miſerable indeed. Want of attention to theſe things, in forming connections for life, has rooted out more families than the plague, famine, or the ſword; and while theſe connections are formed from mercenary views, that muſt be the caſe.

In our matrimonial contracts, it is amaſing ſo little regard is had to the health and form of the object. Our ſportſmen know, that the generous courſer cannot be bred out of the foundered jade, nor the ſagacious ſpaniel out of the ſnarling cur. This is ſettled upon immutable laws. The man who marries a woman of a ſickly conſtitution, and deſcended of unhealthy parents, whatever his views may be, cannot be ſaid to act a prudent part. A puny ſcrophulous woman may prove fertile; ſhould this be the caſe, the family muſt become an infirmary: What proſpect of happineſs the father of ſuch a family has, we ſhall leave any one to judge.

The Jews, by the poſitive direction of the Almighty, were forbid to have any manner of commerce with the diſeaſed; and indeed to this all wiſe legiſlators ought to have a ſpecial regard. In ſome ſtates, the marriage of diſeaſed people has actually been prohibited. This is an evil of a complicated kind, a natural deformity, and political miſchief; and therefore requires a public conſideration.

Such children as have the misfortune to be born of diſeaſed parents, will require to be nurſed with greater care than others. This is the only way to make amends for the defects of conſtitution; and it will often go a great length. A healthy nurſe, wholeſome air, and enough of exerciſe, will do wonders.

ders. But, when theſe are neglected, little is to be expected from any other quarter. The defects of conſtitution cannot be ſupplied by medicine.

Thoſe who inherit any family-diſeaſe ought to be very circumſpect in their manner of living. They ſhould conſider well the nature of ſuch diſeaſe, and guard againſt it by a proper regimen. It is certain, that family-diſeaſes have often, by proper care, been kept off for one generation: and there is great reaſon to believe, that, by perſiſting in the ſame courſe, ſuch diſeaſes might at length be wholly eradicated. This is a ſubject very little regarded, though of the laſt importance. Family-conſtitutions are as capable of improvement as family-eſtates; and the libertine who impairs the one, does greater injury to his poſterity, than the prodigal who ſquanders away the other.

OF THE CLOTHING OF CHILDREN.

The clothing of an infant is ſo ſimple a matter, that it is ſurpriſing how any perſon ſhould err in it; yet many children loſe their lives, and others are deformed, by errors of this kind.

Nature knows no other uſe of clothes to an infant, but to keep it warm. All that is neceſſary for this purpoſe is to wrap it in a ſoft looſe covering. Were a mother left to the dictates of nature and reaſon, this is certainly the method that ſhe would follow. But the buſineſs of dreſſing an infant has long been out of the hands of mothers, and has at laſt become a ſecret which none but adepts pretend to underſtand.

From the moſt early ages it has been thought neceſſary, that a woman in labour ſhould have ſome perſon to attend her. This in time became a buſineſs; and, as in all others, thoſe who were employed in

in it ſtrove to outdo one another in the different branches of their profeſſion. The dreſſing of a child came of courſe to be conſidered as the midwife's province, who no doubt imagined, that the more dexterity ſhe could ſhew in this article, the more her ſkill would be admired. Her attempts might be ſeconded by the vanity of parents, who, wanting to make a ſhew of the infant as ſoon as it was born, were ambitious to have as much finery heaped upon it as poſſible. Thus it came to be thought as neceſſary for a midwife to excel in bracing and dreſſing an infant, as for a ſurgeon to be expert in applying bandages to a broken limb; and the poor child, as ſoon as it came into the world, had as many rollers and wrappers applied to its body, as if every bone had been fractured in the birth; while theſe were often ſo tight, as not only to gall and wound its tender frame, but even to obſtruct the motion of the heart, lungs, and other organs neceſſary for life.

In ſeveral parts of Britain, the practice of rolling children with ſo many bandages is now, in ſome meaſure, laid aſide; but it would ſtill be a difficult taſk to perſuade the generality of women, that the ſhape of a child does not entirely depend on the midwife's care. So far, however, are all their endeavours to mend the ſhape of children from being ſucceſsful, that they conſtantly operate the contrary way, and mankind become deformed juſt in proportion to the means uſed to prevent deformity. How little deformity of body is to be found among uncivilifed nations! So little indeed, that it is vulgarly believed they put all their deformed children to death. The truth is, they hardly know ſuch a thing as a deformed child. Neither ſhould we, if we followed their example. Savage nations never think of manacling their children. They allow them the full uſe of every organ, carry them abroad in

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the open air, waſh their bodies daily in cold water, &c. By this management, their children become ſo ſtrong and hardy, that, by the time our puny infants get out of the nurſe's arms, theirs are able to ſhift for themſelves.

Among brute animals, no art is neceſſary to procure a fine ſhape. Though many of them be extremely delicate when they come into the world, yet we never find them grow crooked for want of ſwaddling-bands. Is nature leſs generous to the human kind? No; but we take the buſineſs out of Nature's hands.

Not only the analogy of other animals, but the very feelings of infants, tell us, that they ought to be kept eaſy, and free from all preſſure. They cannot indeed ſpeak their complaints; but they can ſhew ſigns of pain; and this they never fail to do, by crying, when pinched by their clothes. No ſooner are they freed from their bracings, than they ſeem pleaſed and happy; yet, ſtrange infatuation! the moment they hold their peace, they are again committed to their chains.

If we conſider the body of an infant as a bundle of ſoft pipes, repleniſhed with fluids in continual motion, the danger of preſſure will appear in the ſtrongeſt light. Nature, in order to make way for the growth of children, has formed their bodies ſoft and flexible; and, leſt they ſhould receive any injury from preſſure in the womb, has ſurrounded the *fœtus* every way with fluids. This ſhews the care which nature takes to prevent all unequal preſſure on the bodies of infants, and to defend them againſt every thing that might in the leaſt cramp or confine their motions.

Even the bones of an infant are ſo ſoft and cartilaginous, that they readily yield to the ſlighteſt preſſure, and eaſily take on a bad ſhape, which can never after be remedied. Hence it is, that ſo many people

people appear with high ſhoulders, crooked ſpines, and flat breaſts, who were born with as good a ſhape as others, but had the misfortune to be ſqueezed into monſters by the application of ſtays and bandages.

Preſſure, by obſtructing the circulation, prevents the equal diſtribution of nouriſhment to the different parts of the body, by which means the growth becomes unequal. One part of the body grows too large, while another remains too ſmall; and thus in time the whole frame becomes diſproportioned and misſhapen. To this we muſt add, that when a child is cramped in its clothes, it naturally ſhrinks from the parts affected, and by putting its body into unnatural poſtures, it becomes deformed by habit.

Deformity of body may proceed from weakneſs or diſeaſes; but, in general, it is the effect of improper clothing. Nine tenths, at leaſt, of the deformity amongſt mankind, muſt be imputed to this cauſe. A deformed body is not only diſagreeable to the eye, but injurious to the health. By a bad figure, both the animal and vital functions muſt be impeded, and of courſe health impaired. Hence, few people remarkably misſhapen are ſtrong and healthy.

The new motions which commence at the birth, as the circulation of the whole of the blood through the lungs, reſpiration, the periſtaltic motion, &c. afford another ſtrong argument for keeping the body of an infant free from all preſſure. Theſe organs, not having been accuſtomed to move, are eaſily ſtopped; but when that happens, death muſt enſue. Hardly any method could be deviſed more effectually to ſtop theſe motions, than bracing the body too tight with * rollers, &c. Were theſe to be applied in

* This is by no means inveighing againſt a thing that does not happen. In many parts of Britain at this day, a roller, five or ſix feet in length, is applied round the child's body as ſoon as it is born.

in the ſame manner to the body of an adult for an equal length of time, they could hardly fail to hurt the digeſtion, and make him ſick. How much more hurtful they muſt be to tender infants, we ſhall leave to any one to judge.

Whoever conſiders theſe things will not be ſurpriſed that ſo many children die of convulſions ſoon after the birth. Theſe fits are generally attributed to ſome inward cauſe; but, in fact, they oftener proceed from our own imprudent conduct. I have known a child ſeized with convulſion-fits, ſoon after the midwife had done ſwaddling it; but, upon taking off the rollers and bandages, it was immediately relieved, and never had any convulſion-fits afterwards. Numerous examples of this ſort might be brought, were they neceſſary.

It would be ſafer to fix on the clothes of an infant with ſtrings than pins, as theſe often gall and irritate their tender ſkins, and occaſion convulſions. Inſtances have been known, where pins were found ſticking above half an inch into the body of a child after it had died of convulſion-fits, which, in all probability, proceeded from that cauſe.

Children are not only hurt by the tightneſs of their clothes, but alſo by the quantity. Every child has ſome degree of fever after the birth; and, if it be loaded with too many clothes, the fever muſt be increaſed. But that is not all; the child is generally laid in bed with the mother, who is likewiſe feveriſh; to which we may add the heat of the lying-in bed-chamber, and the wines, and other heating things, too often given to children immediately after the birth. When all theſe are combined, which does not ſeldom happen, they muſt increaſe the fever to ſuch a degree as will endanger the life of the infant.

The danger of keeping infants too hot, will further appear, if we conſider, that, after being for ſome

ſome time in the ſituation mentioned above, they are often ſent into the country to be nurſed in a cold houſe *. Is it any wonder, if a child, from ſuch a tranſition, catches a mortal cold, or contracts ſome other fatal diſeaſe? When an infant is kept too hot, its lungs not being ſufficiently expanded, are apt to remain weak and flaccid for life; from whence proceed coughs, conſumptions, and other diſeaſes of the breaſt.

It would anſwer little purpoſe to ſpecify the particular pieces of dreſs proper for an infant. Theſe ever will vary in different places, according to cuſtom and the humour of parents. The great rule to be obſerved is, *That a child have no more clothes than are neceſſary to keep it warm, and that they be quite eaſy for its body.*

Stays are the very bane of children. A volume would not ſuffice to point out all the ill effects of this uſeleſs piece of dreſs. The madneſs in favour ſtays ſeems, however, to have been at a height; and it is to be hoped the world will, in time, become wiſe enough to know, that the human ſhape does not ſolely depend upon whale-bone and bend-leather †.

We ſhall only add, with reſpect to the clothes of children, that they ought to be kept very clean. Children perſpire more than adults; and, if their clothes be not frequently changed, they become very hurtful. Dirty clothes not only gall and fret the tender ſkins of infants, but likewiſe occaſion ill ſmells; and, what is worſe, tend to produce vermin and cutaneous diſeaſes.

Cleanlineſs is not only agreeable to the eye, but tends greatly to preſerve the health of children. It promotes the perſpiration; and, by that means, frees

* Cadogan.

† Stays made of bend-leather are worn by all the women of lower ſtation in many parts of England.

frees the body from ſuperfluous humours, which, if retained, could not fail to occaſion diſeaſes. A nurſe can have no excuſe for allowing a child to be dirty. Poverty may oblige her to give it coarſe clothes; but if ſhe does not keep them clean, it muſt be her own fault.

OF THE FOOD OF CHILDREN.

NATURE not only points out the food proper for an infant, but actually prepares it. This, however, is not ſufficient to prevent ſome who think themſelves wiſer than nature, from attempting to bring up their children without her proviſion. Nothing can ſhow the diſpoſition which mankind have to depart from nature, more than their endeavouring to bring up children without the breaſt. The mother's milk, or that of a healthy nurſe, is unqueſtionably the beſt food for an infant. Neither art nor nature can afford a proper ſubſtitute for it. A child may ſeem to thrive for a few months without the breaſt; but, when teething, the ſmall-pox, and other diſeaſes incident to childhood, come on, it generally falls a victim: An evident proof, that its food is unwholeſome, and its humours bad.

A child ſoon after the birth ſhows an inclination to ſuck; and there ſeems to be no reaſon why it ſhould not be gratified. It is true, the mother's milk does not always come immediately after the birth; but is not this the way to bring it? The firſt milk that the child can ſqueeze out of the breaſt, anſwers the purpoſe of cleanſing better than all the drugs in the apothecary's ſhop, and at the ſame time prevents inflammations of the breaſt, fevers, and other diſeaſes incident to mothers.

It is ſtrange how people came to think that the firſt thing given to a child ſhould be drugs. This is

is beginning with medicine by times, and no wonder that they generally end with it. It ſometimes happens, that a child does not paſs the *meconium* ſo ſoon as could be wiſhed. This has induced phyſicians in ſuch caſes to give ſomething of an opening nature to cleanſe the firſt paſſages. Midwives have improved upon this hint, and never fail to give ſyrups, oils, &c. whether they be neceſſary or not. Cramming an infant with ſuch indigeſtible ſtuff as ſoon as it is born, can hardly fail to make it ſick, and is more likely to occaſion diſeaſes, than to prevent them. Children are ſeldom long after the birth without having paſſage both by ſtool and urine; though theſe evacuations may be wanting for ſome time without any danger.

Were a child permitted to ſuck its mother as ſoon as it ſhows an inclination for the breaſt, it would need no other phyſic; but if it muſt have ſomething before it be allowed the breaſt, let it be a little ſimple water-pap, to which may be added an equal quantity of new milk. If this be given without any wines, or ſpiceries, it will neither heat the blood, load the ſtomach, nor occaſion gripes.

Upon the firſt ſight of an infant, almoſt every perſon is ſtruck with the idea of its being weak, feeble, and wanting ſupport. This naturally ſuggeſts the need of cordials. Accordingly, we find wines univerſally mixed with the firſt food of children. Nothing can be more fallacious than this way of reaſoning, or more hurtful to infants than the conduct founded upon it. Children need very little food for ſome time after the birth; and what they receive ſhould be thin, weak, light, and of a cooling quality. A very ſmall quantity of wine is ſufficient to heat and inflame the blood of an infant; but every perſon, converſant in theſe matters, muſt know, that moſt of the diſeaſes of infants

proceed from the heat of their humours, as the thruſh, &c.

If the mother or nurſe has enough of milk, the child will need little or no other food before the third or fourth month. It will then be proper to give it, once or twice a-day, a little of ſome food that is eaſy of digeſtion; as water-pap, milk-pottage, weak broth with bread in it, or the like. This will eaſe the mother; it will accuſtom the child by degrees to take food, and render the weaning both leſs difficult and dangerous. All great and ſudden tranſitions are to be avoided in nurſing. For this purpoſe, the food of children ought to be ſimple, as nearly as poſſible reſembling the properties of milk. Indeed milk itſelf ſhould make a principal part of their food, not only before they be weaned, but for a long time after.

Next to milk, we would recommend good light bread. Bread may be given to a child as ſoon as it ſhows an inclination to chew, and it may at all times be allowed as much as it pleaſes. The very chewing of bread will help to cut the teeth, and promote the diſcharge of *ſaliva*, while, by mixing with the nurſe's milk in the ſtomach, it will afford an excellent nouriſhment. Children ſhow an early inclination to chew whatever is put into their hands. Parents obſerve the inclination, but generally miſtake the object. Inſtead of giving the child ſomething which may at once exerciſe its gums and afford it nouriſhment, they commonly put into its hand a piece of hard metal, or impenetrable coral. A cruſt of bread is the beſt gum-ſtick. It not only anſwers the purpoſe better than any thing elſe, but has the additional properties mentioned above, of nouriſhing the child, and carrying the *ſaliva* down to the ſtomach, which is too valuable a liquor to be loſt.

Bread, beſides being uſed dry, may be many ways

ways prepared into food for children. One of the beſt methods of preparing it, is to boil it in water, afterwards pouring the water off, and mixing with the bread a proper quantity of new milk unboiled. Milk is both more wholeſome and nouriſhing this way than boiled, and is leſs apt to occaſion coſtiveneſs. For a child farther advanced, bread may be mixed in veal or chicken broth, made into puddings, or the like. Bread is a proper food for children at all times, provided it be plain, made of wholeſome grain, and well fermented; but when enriched with fruits, ſugars, or ſuch things, it becomes very unwholeſome.

It is ſoon enough to allow children animal food when they have got teeth to eat it. They ſhould never taſte it till after they are weaned, and even then they ought to uſe it very ſparingly. Indeed, when children live wholely on vegetable food, it is apt to ſour on their ſtomachs; on the other hand, too much fleſh heats the blood, and occaſions fevers and other inflammatory diſeaſes. This plainly points out a proper mixture of animal and vegetable food as moſt fit for children.

Few things are more hurtful to children, than the common method of ſweetening their food. It not only makes them grow fat and bloated, but entices them to take more food than they ought to do. It is pretty certain, if children's food were quite plain, that they would never take more than enough. Thus the exceſſes of children are entirely owing to nurſes. If a child be gorged with food at all hours, and enticed to take it, by making it ſweet and agreeable to the palate, is it any wonder if ſuch a child comes in time to crave more food than it ought to have?

Children may be hurt by too little as well as too much food. After a child is weaned, it ought to be fed four or five times a-day; but ſhould never

be accuſtomed to eat in the night; neither ſhould it have too much at one time. Some lay it down as a rule, that no child ought to be fed above three times in twenty-four hours; whereas moſt adults eat four times in the ſame ſpace. The food of children is generally lighter than that of adults; their digeſtion is likewiſe more quickly performed: If to theſe we add the power of habit, we will be inclined to think, that children ſhould be fed oftener than grown perſons. If a child, who has been accuſtomed to ſuck its nurſe at all hours, be ſuddenly deprived of that, and reſtricted to three meals a-day, bad conſequences muſt follow. I have often ſeen the ſcheme of bringing children to live on three regular meals a-day tried, but never knew it ſucceed. Children thrive much better with ſmall quantities of food frequently given. This neither overcharges the ſtomach, nor hurts the digeſtion, and is certainly moſt agreeable to nature.

Writers on nurſing have inveighed with ſuch vehemence againſt too much food, that one would be apt to imagine two-thirds of thoſe who die in infancy were actually crammed to death. This has induced many parents to ruin the conſtitutions of their children, by running into the other extreme. The error of pinching children in their food, is more hurtful than its oppoſite. Nature has many ways of relieving herſelf when overcharged; but a child who is pinched with hunger will never become a ſtrong or healthy man. That errors are frequently committed on both ſides, we are ready to acknowledge; but where one child is hurt by the quantity of its food, ten ſuffer from the quality. That is the principal evil, and claims our ſtricteſt attention.

Many people imagine, that food which they love themſelves cannot be bad for their children: But

But this notion is very abſurd. In the more advanced periods of life, we often acquire an inclination for food, which, when children, we could not bear to taſte. There are many things that may agree very well with the ſtomach of a grown perſon, which would be very hurtful to a child; as high-ſeaſoned, ſalted, and ſmoke-dried proviſions, &c. It would alſo be improper to feed children with fat meat, ſtrong broths, rich ſoups, gravies, or the like.

All ſtrong liquors are hurtful to children. Some parents teach their children to guzzle ale, and other ſtrong liquors, at every meal; but ſuch a practice cannot fail to do miſchief. Theſe children ſeldom eſcape the violence of the ſmall-pox, meaſles, hooping-cough, or ſome other feveriſh diſorder. Milk, water, butter-milk, or whey, make the moſt proper drink for children. If they have any thing ſtronger, it may be fine ſmall beer, or a little wine mixed with water. The ſtomachs of children can digeſt well enough without the aſſiſtance of warm ſtimulants. Young people are naturally hot, and conſequently are eaſily hurt by every thing of a heating quality: Their blood has a conſtant tendency to inflammation, which all ſtrong liquors muſt increaſe.

Few things are more hurtful to children than unripe fruits. Theſe not only ſour the ſtomach, but relax it, and weaken the digeſtion; by which means it becomes a proper neſt for worms of all kinds. Children indeed ſhow the greateſt inclination for fruit; and I am apt to believe, that if good ripe fruit were allowed them in proper quantity, it would have no bad effects. We ſeldom find a natural inclination wrong, if directed to its proper objects. Fruits are generally of a cooling nature, and correct the heat and acrimony of the humours. This is what moſt children want; only

care ſhould be taken leſt they exceed. Indeed the beſt way to prevent children from going to exceſs in the uſe of fruit, or eating that which is bad, is to allow them a proper quantity of what is good.

Roots which contain a crude viſcid juice ſhould be ſparingly given to children. They fill the body with groſs humours, and tend to produce eruptive diſeaſes. This caution is peculiarly neceſſary for the poor; being glad to get what will fill their children's bellies for a little money, they ſtuff them two or three times a-day with potatoes and the like. Children had better eat a ſmall quantiy of ſuch food as would yield a wholeſome nouriſhment, than be crammed with what their digeſtive powers are unable properly to aſſimilate.

Butter ought likewiſe to be ſparingly given to children. It both relaxes the ſtomach, and produces groſs humours. Indeed moſt things that are fat or oily, have the ſame effect. Butter, when ſalted, becomes ſtill more hurtful. Inſtead of butter, ſo plentifully eat by children in moſt parts of Britain, we would recommend honey. Honey is not only more wholeſome than butter, but likewiſe cheaper. It is cooling, cleanſing, and tends to ſweeten the humours; whereas butter is juſt the reverſe. Children who eat honey are ſeldom troubled with worms. They are alſo leſs ſubject to the common cutaneous diſeaſes, as itch, ſcabbed-head, &c.

Many people err in thinking the diet of children ſhould be always moiſt. When children live entirely upon ſlops, it relaxes their ſolids, renders them weak, and prediſpoſes them to rickets, ſcropulas, and other glandular diſorders. Relaxation is one of the moſt general cauſes of the diſeaſes of children. Every thing, therefore, which tends to unbrace their bodies, ought to be careſully avoided.

We would not be underſtood as confining children

dren to any kind of particular food. Their diet may be frequently varied, provided regard be had to ſimplicity. Whatever food we are moſt accuſtomed to in youth, we generally love during life. For this reaſon, children ſhould have a little of any kind of food that is plain and wholeſome, leſt they ſhould contract an averſion from it, and afterwards be under a neceſſity of uſing it.

OF THE EXERCISE OF CHILDREN.

Of all the cauſes which conſpire to render the lives of children ſhort and miſerable, none has greater influence than the want of proper exerciſe: Healthy parents, wholeſome food, and proper clothing, will avail little where it is neglected: Enough of exerciſe will make up for ſeveral other defects; but nothing can ſupply the want of it. It is abſolutely neceſſary to the health, the growth, and the ſtrength of children.

The deſire of exerciſe is almoſt coeval with life itſelf. Were this principle attended to, many diſeaſes might be prevented. But while indolence and ſedentary employments keep two-thirds of mankind from either taking exerciſe themſelves, or giving it to their children, what have we to expect but diſeaſes and deformity among their offſpring? The rickets, ſo deſtructive to children, never appeared in Britain till manufactures began to flouriſh, and people, attracted by the love of gain, left the country to follow ſedentary employments in great towns. It is amongſt theſe people that this diſeaſe chiefly prevails, and not only deforms, but kills many of their offspring.

The analogy of other young animals ſhews that

children require exercise. Every creature endeavours to make use of its limbs as soon as it can, and many of them, even when under no necessity of moving in quest of food, cannot be restrained without force. This is evidently the case with the calf, the lamb, and many other young animals. If these creatures were not permitted to frisk about, and take exercise, they would soon die. The same inclination appears very early in the human species; but as they are not able to take exercise themselves, it is the business of their parents or nurses to assist them.

Children may be exercised in various ways. The best method, while they are young, is to carry them about in the nurse's arms. This gives the nurse an opportunity of talking to the child, and of pointing out every thing that may please and delight its fancy. It is much safer than swinging an infant in a machine, or leaving it to the care of such as are not fit to take care of themselves. Nothing can be more foolish than to set one child to keep another; that practice has proved fatal to many infants, and has rendered others lame for life.

When children begin to walk, the safest and best method of leading them about is by the hands. The common way of swinging children by strings fixed to their backs, has many bad consequences. It makes them throw their bodies forward, and press with their whole weight upon the breast: by that means the breathing is obstructed, the breast flattened, and the bowels compressed. This hurts the digestion, and occasions consumptions of the lungs, and other diseases.

It is a common notion, that if children be set upon their feet too soon, their legs will become crooked. There is reason to believe, that the very reverse of this is true. Every member acquires strength in proportion as it is exercised. The

limbs

limbs of children are weak indeed, but their bodies are proportionably light; and had they ſkill to direct themſelves, they would ſoon be able to ſupport their own weight. Who ever heard of any other animal that became crooked by uſing its legs too ſoon? Indeed, if a child be not permitted to make uſe of its legs till a conſiderable time after the birth, and be then ſet upon them with its whole weight at once, there may be ſome danger of hurting it; but this proceeds entirely from the child's not having been accuſtomed to uſe its legs from the beginning.

Mothers of the poorer ſort think they gain a great deal by making their children lie or ſit while they work. In this they are greatly miſtaken. By neglecting to give their children exerciſe, they are obliged to keep them a long time before they can do any thing for themſelves, and to ſpend more on medicine than would have paid for proper care, while it can never ſupply its place. To take care of their children, is the moſt profitable buſineſs in which even the poor can employ themſelves: But, alas! it is not always in their power. Poverty often obliges them to neglect their offſpring, in order to procure the neceſſaries of life. When that is the caſe, it becomes the intereſt as well as the duty of the public to aſſiſt them. Ten thouſand times more benefit would accrue to the State, by enabling the poor to bring up their own children, than from all the * hoſpitals that ever can be erected for that purpoſe.

Whoever

* If we make it the intereſt of the poor to keep their offspring alive, we ſhall loſe very few of them. This I have had many opportunities of obſerving. A ſmall premium given to the poor annually for every child they have alive, would ſave more infant-lives, than if the whole revenues of the nation were expended on hoſpitals for that purpoſe. This would make the poor eſteem fertility a bleſſing; whereas many of them think it the greateſt curſe that can befal them; and in place of wiſhing their children to live, ſo far does poverty get the better of natural affection, that they are very happy when they die.

Whoever conſiders the ſtructure of the human body, will ſoon be convinced of the neceſſity of exerciſe for the health of children. The body is compoſed of an infinite number of veſſels, whoſe contents cannot be puſhed on without the action and preſſure of the muſcles. But if the fluids remain inactive, obſtructions muſt happen, and the humours will of courſe be vitiated, which cannot fail to occaſion diſeaſes. Nature has furniſhed both the veſſels which carry the blood and lymph, with numerous valves, in order that the action of every muſcle might puſh forward their contents; but without action, this admirable contrivance can have no effect. The final cauſe of this part of the animal economy proves the neceſſity of exerciſe for the preſervation of health.

Arguments to ſhew the importance of exerciſe might be drawn from every part of the animal economy: Without exerciſe the circulation of the blood cannot be properly carried on, nor the different ſecretions duly performed; without exerciſe the humours cannot be properly prepared, nor the ſolids rendered ſtrong or firm. The action of the heart, the motion of the lungs, and all the vital functions, are greatly aſſiſted by exerciſe. But to point out the manner in which theſe effects are produced, would lead us farther into the economy of the human body, than moſt of thoſe for whom this treatiſe is intended would be able to follow. We ſhall therefore only add, that where exerciſe is neglected, none of the animal functions can be duly performed; and when that is the caſe, the whole conſtitution muſt go to wreck.

Certainly our firſt object in the management of children ought to be a good conſtitution. This lays a foundation for their being uſeful and happy in life; and whoever neglects it, not only fails in his duty to his offspring, but to ſociety.

One

One very common error of parents, by which they hurt the conſtitutions of their children, is ſending them too young to ſchool. This is often done ſolely to prevent trouble. When the child is at ſchool, he needs no keeper. Thus the ſchoolmaſter is made the nurſe; and the poor child is nailed to a ſeat ſeven or eight hours a-day, which ought to be ſpent in exerciſe and diverſions. Sitting ſo long cannot fail to produce the worſt effects upon the body; nor is the mind leſs injured. Early application weakens the faculties, and often fixes in the mind ſuch an averſion from books, as can never be removed.

But ſuppoſe this were the way to make children ſcholars, it ought not to be done at the expence of their conſtitutions. Our anceſtors, who ſeldom went to ſchool before they were men, were not leſs learned than we. But we imagine the boy's education will be quite loſt, unleſs he be carried to ſchool in his nurſe's arms. No wonder if ſuch hot-bed plants ſeldom become either ſcholars or men!

Not only the confinement in public ſchools, but the number often proves extremely hurtful. Children are much injured by being kept in crowds within doors; their breathing not only renders the place unwholeſome, but if any one of them happens to be diſeaſed, the reſt catch the infection. A ſingle child has been often known to communicate the bloody-flux, the hooping-cough, the itch, or other diſeaſes, to almoſt every individual in a numerous ſchool.

But if faſhion will prevail, and infants muſt be ſent to ſchool, we would earneſtly recommend to teachers, as they value the intereſts of ſociety, not to confine them too long at a time, but to permit them to run about and play at ſuch active diverſions as may promote their growth, and improve their conſtitutions. Were boys, inſtead of being whipped

whipped for ſtealing an hour to run, ride, ſwim, or the like, encouraged to employ their time in theſe manly and uſeful exerciſes, it would have many excellent effects.

It would likewiſe be of great ſervice to boys, if, at a proper age, they were all taught the military exerciſe. This would improve their ſtrength, courage, and agility; and, when their country called for their aſſiſtance, it would enable them to act in her defence, without being obliged to undergo a tedious and troubleſome courſe of inſtructions, at a time when they are leſs fit to learn new motions, geſtures, &c.

An effeminate education will infallibly ſpoil the beſt natural conſtitution; and, if boys are brought up in a more delicate manner than even girls ought to be, they never will be men.

But the common education of girls is no leſs hurtful to the conſtitution than that of boys. Miſs is ſet down to her frame, before ſhe can put on her clothes, and is taught to believe, that to excel at the needle is the only thing that can entitle her to general eſteem. It is unneceſſary here to inſiſt upon the dangerous conſequences of obliging girls to ſit too much; they are pretty well known, and are too often felt at a certain time of life. But ſuppoſe this critical period to be got over, greater dangers ſtill await them when they come to be mothers. Women who have been early accuſtomed to a ſedentary life, generally run great hazard in child-bed, while thoſe who have been uſed to romp about, and take enough of exerciſe, are ſeldom in any danger.

One hardly meets with a girl who can, at the ſame time, boaſt of early performances with the needle, and a good conſtitution. Cloſe and early confinement generally occaſions indigeſtions, headachs, pale complexions, pain of the ſtomach, loſs

of

of appetite, coughs, conſumptions of the lungs, and deformity of body. The latter, indeed, is not to be wondered at, conſidering the aukward poſtures in which girls ſit at many kinds of needle-work, and the delicate flexible ſtate of their bodies in the early period of life.

Would mothers, inſtead of having their daughters inſtructed in many uſeleſs accompliſhments, teach them plain work and houſewifery, allowing them enough of time to run about, they would both make them better mothers, and more uſeful members of ſociety. I am no enemy to genteel accompliſhments, but would have them only conſidered as ſecondary, and always diſregarded when they impair health.

Many people imagine it a great advantage for children to be early taught to gain their bread. This opinion is certainly right, provided they be ſo employed as not to hurt their health or growth; but, when theſe ſuffer, ſociety, in place of being gainers, are real loſers by their labour. There are few employments, except ſedentary ones, by which children can earn a livelihood; and, if they be ſet to theſe too ſoon, it ruins their conſtitutions. Thus, by gaining a few years from childhood, we generally loſe twice as many in the other periods of life, and even render the perſon leſs valuable while he does live.

In order to be ſatisfied of the truth of this obſervation, one needs only look into the great manufacturing towns, where he will find a puny degenerate race of people, weak and ſickly all their lives, ſeldom exceeding the middle period of life; or, if they do, being unfit for buſineſs, they become a burden to ſociety. Thus, arts and manufactures, though they may increaſe the riches of a country, are by no means favourable to the health of its inhabitants. Good policy would therefore require, that

that ſuch people as labour during life, ſhould not be ſet too early to work. Every perſon, converſant in the breeding of horſes, or other work-animals, knows, that, if they be ſet to hard labour too ſoon, they never will turn out to advantage. This is equally true with reſpect to the human ſpecies.

There are, nevertheleſs, various ways of employing young people, without hurting their health. The eaſier parts of gardening, huſbandry, or any buſineſs carried on without doors, are moſt proper. Theſe are employments that moſt young people are fond of; and ſome parts of them may always be adapted to their age, taſte, and ſtrength.

Such parents, however, as are under the neceſſity of employing their children within doors, ought to allow them enough of time for active diverſions. This would both encourage them to do more work, and prevent their conſtitutions from being hurt.

Some imagine that exerciſe within doors is ſufficient; but they are greatly miſtaken. One hour ſpent in running, or any other exerciſe without doors, is worth ten within. When children cannot go abroad, they ought indeed to be exerciſed at home. The beſt method of doing this is to make them run about in a long room, or dance. This laſt kind of exerciſe, if not carried to exceſs, is of excellent ſervice to young people. It cheers the ſpirits, promotes perſpiration, ſtrengthens the limbs, &c. An eminent phyſician uſed to ſay, that he made his children dance inſtead of giving them phyſic. It were well if more people followed his example.

As many of the chronic diſeaſes of children might be prevented by the prudent uſe of the Cold Bath, we ſhall point out ſome of thoſe miſtakes which commonly prevent its having the deſired effect.

The Cold Bath may be conſidered as an aid to exerciſe. By it the body is braced and ſtrengthened, the

the circulations and ſecretions promoted, and, were it conducted with prudence, many diſeaſes, as the rickets, ſcrophula, &c. might thereby be prevented. The ancients, who took every method to render children hardy and robuſt, were no ſtrangers to the uſe of the cold bath; and, if we may judge from the great number of conſecrated wells in this iſland, many of which have no other virtues but thoſe of cold water, yet are ſaid to have been famous for curing the diſeaſes of children, we will ſee cauſe to believe, that the practice of immerſing children in cold water muſt have been very common among our anceſtors.

So far as I have been able to obſerve, the cold bath does as much miſchief as good; but that is owing to the want of due care in uſing it. Children born of delicate parents are not ſuddenly to be plunged over the head in cold water. They muſt be gradually brought to it, by uſing tepid water at firſt, and making it a little cooler every time they are bathed, till by degrees they be able to bear it quite cold. Children afflicted with internal diſeaſes, as inflammations or obſtructions of the breaſt, bowels, &c. ought not to be bathed in cold water.

It is next to impoſſible to bring nurſes to make a proper uſe of the cold bath: Their prejudices are ſo ſtrong and deep-rooted, that no reaſoning is able to bring them off their own way. I have known ſome of them who would not dry a child's ſkin after bathing it, leſt it ſhould deſtroy the effect of the water. Others will even put clothes dipt in the water upon the child, and either put it to bed, or ſuffer it to go about in that condition. Some nurſes believe, that the whole virtue of the water depends upon its being dedicated to ſome particular ſaint. Theſe will carry a child 40, 50, or 100 miles, to have it once dipt in a certain well; and this is to cure it of whatever diſeaſe it labours under.

under. Others place their confidence in a certain number of dips, as three, ſeven, nine, or the like; and the world could not perſuade them, if theſe do not ſucceed, to try it a little longer.

Thus, by the whims and caprice of nurſes, a valuable remedy is loſt, and the phyſician is often diſappointed in his hopes by their miſconduct. When the cold bath is uſed as a remedy, it ought always to be by the advice of a phyſician, and the nurſe ſhould adhere ſtrictly to his directions. I have ſeen wonderful cures in the moſt obſtinate ſcrophulous caſes performed by the cold bath. The ſalt water in this caſe is always to be preferred. That will ſucceed where all other medicines have failed.

Every child, when in health, ought to have its extremities at leaſt waſhed with cold water daily. This is a partial uſe of the cold bath, and is better than none. In winter this may ſuffice; but in the warm ſeaſon, if a child be relaxed, or ſeem to have a tendency to the rickets or ſcrophula, its whole body ought to be daily immerſed in cold water *. Care, however, muſt be taken not to do this when the body is hot, or the ſtomach full. The child ſhould be dipt only once at a time, ſhould be taken out immediately, and have its ſkin well rubbed with a dry cloth.

OF THE BAD EFFECTS OF UNWHOLSOME AIR UPON CHILDREN.

Few things are more deſtructive to children, than confined or unwholſome air. This is one reaſon why ſo few of thoſe infants live who are put into hoſpitals, or pariſh-workhouſes. Theſe places are generally

* Children of this deſcription ought, wherever it can be done, to be ſent for two or three months every year to ſea-bathing quarters.

generally crowded with old, ſickly, and infirm people; by that means the air is rendered ſo extremely pernicious, that it becomes a poiſon to infants.

Want of wholeſome air is likewiſe deſtructive to many of the children born in great towns. There the poorer ſort of inhabitants live in low, dirty, confined houſes, where the freſh air has no acceſs. Though grown people, who are hardy and robuſt, may live for a number of years in ſuch ſituations, yet they generally prove fatal to their offspring, few of whom arrive at maturity, and thoſe who do are weak and deformed. Such people, not being able to carry their children abroad into the open air, we muſt lay our account with loſing the greater part of their progeny. But the rich have not that excuſe. It is their buſineſs to ſee that their children be daily carried abroad, and that they be kept in the open air for a ſufficient time. This will ſucceed better if the mother goes along with them. Servants are often negligent in theſe matters, and allow a child to ſit or lie on the damp ground, in place of leading or carrying it about. The mother ſurely needs air as well as her children; and how can ſhe be better employed than in attending them? Some may think this office below their dignity; but I know no ſituation in which a mother appears to ſuch advantage, as when ſurrounded by a circle of healthy children.

A very bad cuſtom prevails of making children ſleep in ſmall apartments, or crowding two or three beds into one chamber. In place of that, the nurſery ought always to be the largeſt and beſt-aired room in the houſe. When children are confined in ſmall apartments, the air is not only unwholeſome, but ſuch places being generally too hot, their bodies are relaxed, and this diſpoſes them to catch

cold when they go abroad, and has many other bad effects *.

Children who are kept within doors all day, and ſleep all night in warm cloſe apartments, may, with great propriety, be compared to plants nurſed in a hot houſe, in place of the open air. Though ſuch plants, by extraordinary care, may be kept alive for ſome time; yet they never will arrive at that degree of ſtrength, vigor, and magnitude, at which they would have arrived in the open air, nor would they be able to bear it afterwards ſhould they be expoſed to it.

Children brought up in the country, who have been accuſtomed to freſh open air, ſhould not be too early ſent to great towns, where the air is confined and unwholeſome. This is frequently done with a view to forward their education, but proves very hurtful to health. Thoſe who are grown up do not ſuffer near ſo much from bad air as young perſons. All ſchools and ſeminaries of learning ought to be ſo ſituated as to have freſh, dry, wholeſome air, and ſhould never be too much crowded.

Without entering into a detail of the particular advantages of wholeſome air to children †, we ſhall only

* Children ought not to be wrapped up too cloſe in cradles either, or to have their face covered while aſleep, ſo as to be forced to breathe the ſame vitiated air over and over again.

† In addition to what has been ſo fully and ſo ably ſtated by our author, reſpecting the importance of freſh air to young children, we have only to obſerve, as we think the ſubject of great importance, that it is not enough that children in large towns ſhould be ſent out for one or two hours, once or twice a-day, into the ſtreets. The atmoſphere, in all conſiderable towns, is more or leſs vitiated; and therefore, though preferable to the air within doors, is certainly very far from being ſo ſalubrious, eſpecially to children, as freſh country-air. In ſuch ſituations, children ought undoubtedly in good weather to be ſent, at leaſt twice a-day, to ſome country-walk that may chance to be neareſt them, where they may both enjoy the pure air, and at the ſame time amuſe themſelves at pleaſure, without the riſk of thoſe accidents to which they are inevitably expoſed on the ſtreets of a large city.

only obſerve, that when they enjoy that bleſſing, they generally ſleep well, eat well, and thrive accordingly. It braces and ſtrengthens their bodies, enlivens their ſpirits, and every way promotes their growth and health.

OF NURSES.

Nurses are guilty of many faults, which prove fatal to infants. It is therefore the duty of parents to watch over their conduct with the greateſt care, and to be extremely cautious in the choice of them *.

One of the moſt common faults of nurſes is to doſe children with ſtupefactives, or ſuch things as lull them aſleep. An indolent nurſe, who does not give a child enough of exerciſe in the open air to make it ſleep, and does not chuſe to be diſturbed by it in the night, will ſeldom fail to procure for it a doſe of laudanum, diacodium, ſaffron, or, what anſwers the ſame end, a dram of ſpirits, or other ſtrong liquors. Theſe, though they be certain poiſon to children, are every day adminiſtered by many who bear the character of very good nurſes.

A nurſe who has not enough of milk is apt to imagine, that ſhe can ſupply that defect by giving the child wines, cordial waters, or other ſtrong liquors. This is an egregious miſtake. The only thing that has any chance to ſupply the place of the nurſe's milk, muſt be ſomewhat nearly of the

* This direction, at all times proper, is peculiarly ſo, when a child is to be nurſed abroad. In this caſe, it is of the utmoſt conſequence to be well acquainted with the character and diſpoſitions of the perſon to whom we entruſt ſo tender a charge. We ought alſo to obſerve if ſhe be well-tempered and careful, and if her own child be ſtout and healthy.

ſame quality, as cow's milk, aſs's milk, or the like, with good bread. It never can be done by the help of ſtrong liquors. Theſe, in place of nouriſhing an infant, never fail to produce the contrary effect.

Children are often hurt by nurſes permitting them to cry long and vehemently. This ſtrains their tender bodies, and frequently occaſions ruptures, inflammations of the throat, lungs, &c. The nurſe who can hear an infant cry till it has almoſt exhauſted itſelf, without endeavouring to pleaſe it, muſt be cruel indeed, and is unworthy to be truſted with the care of a human creature.

Nurſes who deal much in medicine, are always to be ſuſpected. They truſt to it, and neglect their duty. I never knew a good nurſe who had her Godfrey's cordials, Daffy's elixirs, &c. at hand. Such generally imagine, that a doſe of theſe will make up for all defects in food, air, exerciſe, cleanlineſs, &c.

A very pernicious cuſtom of indolent nurſes is allowing children to continue long wet. This is not only diſagreeable, but it galls and frets the infant, and, by relaxing the ſolids, occaſions ſcrophulas, rickets, and other fatal diſeaſes.

Nature often attempts to free the bodies of children from ſuperfluous humours, by throwing them out upon the ſkin: By this means, fevers, and other diſeaſes, are prevented. Nurſes are apt to miſtake ſuch critical eruptions for an itch, or ſome other infectious diſorder. Accordingly they take every method to drive them in. In this way many children loſe their lives; and no wonder, as nature is oppoſed in the very method that ſhe took to relieve them. It ought to be a rule which every nurſe ſhould obſerve, never to ſtop any eruption without proper advice, or being well aſſured, that it is not of a critical nature. At any rate, it is never to be done without previous evacuations.

Looſe

Looſe ſtools is another method by which nature often prevents the diſeaſes of infants *. If theſe proceed too far, no doubt they ought to be checked; but this is never to be done without the greateſt caution. Nurſes, upon the firſt appearance of looſe ſtools, frequently fly to the uſe of aſtringents, or ſuch things as bind the belly. Thus inflammations, fevers, and other fatal diſeaſes, are brought on. A doſe of rhubarb, a gentle vomit, or ſome other evacuations, ſhould always precede the uſe of aſtringent medicines.

One of the greateſt faults of nurſes is concealing the diſeaſes of children from their parents. This they are extremely ready to do, eſpecially when the diſeaſe is the effect of their own negligence. Every perſon muſt have ſeen inſtances of people who were lame for life by a fall out of the nurſe's arms, while ſhe, through fear, concealed the misfortune till it was paſt cure. Every parent who entruſts a nurſe with the care of a child, ought to give her the ſtricteſt charge not to conceal the moſt trifling diſorder or misfortune that may befal it. Parents, inſtead of being angry when a nurſe informs them of ſuch accidents, ought to reward her for her honeſty; this would encourage her to do the ſame upon other occaſions. We can ſee no reaſon why a nurſe ſhould not be puniſhed who conceals any diſorder or misfortune that happens to a child under her care, till it loſes its life. A few examples of this would ſave many infant lives;

* Though we do not believe, with our Author, that *looſeneſs* and *eruptions* in children are commonly critical, and therefore ought not to be ſtopped; we yet cordially agree with him in thinking, that nurſes ought ſeldom or never to tamper with theſe, or indeed any other diſeaſes of children. Their delicate conſtitutions are certainly improper ſubjects for random experiments. In caſes of looſeneſs where the complaint is moderate, and only of ſhort continuance, a little magneſia, or prepared chalk, may frequently be given with advantage, as the diſeaſe often proceeds from acidity. But if the diſeaſe do not very ſoon yield, or if the child begin to be weakened by it, recourſe ought inſtantly to be had to medical aſſiſtance.

but as there is little reaſon to expect that it ever will be the caſe, we would earneſtly recommend it to all parents to look carefully after their children, and not to truſt ſo valuable a treaſure entirely in the hands of an hireling.

Theſe, and many other faults, being daily committed by thoſe who have the care of children, it ought ſurely to rouſe the attention of all parents who have any regard for their offspring, and to make them very circumſpect in the choice of thoſe into whoſe hands they commit them. They ought at leaſt to take care that a nurſe be ſober, cleanly, honeſt, healthy, not too young, nor the contrary; that ſhe have the neceſſaries of life, and a comfortable habitation, &c.

Were it practicable to have all children nurſed and educated in the country, we ſhould loſe very few of them. One ſeldom ſees a country-farmer without a numerous offspring, moſt of whom arrive at maturity. Many things conſpire to that end. The children of theſe people are generally nurſed by their mothers, they eat plain wholeſome food, enjoy the benefit of freſh air, and have enough of proper exerciſe; they have rural ſports and paſtimes ſuited to their age, and as they grow up, find employments adapted to their ſtrength, agreeable to their inclinations, and conducive to their health: They learn induſtry and ſobriety from their parents, and ſeldom fail to practiſe theſe virtues for life. In fine, we cannot help joining with the learned Mr Locke *, in recommending the example of theſe people as a model to all in the management of their children.

* On Education.

As

As many people can underſtand the meaning of a ſhort rule, who are not able to attend to a chain of reaſoning, we ſhall reduce the leading principles of nurſing under the following general heads.

1. Every mother ought to ſuckle her own child, if ſhe can do it with ſafety.

2. A weak, conſumptive, nervous, or hyſteric mother ought not to give ſuck, where a healthy nurſe can be had.

3. No child ſhould be brought up without the breaſt, if it be poſſible to obtain a proper nurſe.

4. The clothes of an infant ſhould be ſoft, light, looſe, and eaſy for its body. They ought to be faſtened on with ſtrings rather than pins.

5. The clothes of children ought to be kept very clean.

6. A new born infant ſhould not be kept too hot.

7. An infant ſhould be permitted to ſuck as ſoon as it ſhows an inclination for the breaſt.

8. An infant ſhould neither be crammed with food nor phyſic as ſoon as it is born; but permitted to lie quiet for ſome time, in order to recover the fatigue of the birth, &c.

9. If an infant muſt have food before it ſucks, let it be water-pap mixed with new milk, free of all wines, ſpiceries, or the like.

10. While the child ſucks, it ſeldom needs much of any other food. It will, however, be right, about the third or fourth month, to begin to give it once or twice a-day a little of ſome food that is light and eaſy of digeſtion. This will make the weaning both leſs troubleſome and dangerous.

11. A child ſhould not be weaned all at once, but by degrees; as all ſudden changes in the diet of children are dangerous.

12. The food of children ought at all times to

be ſimple, but nouriſhing. It ſhould conſiſt of a proper mixture of animal and vegetable ſubſtances *.

13. Children ſhould not be permitted to eat too much fruit, or roots of any kind; but all ſorts of green traſh ought to be kept from them with the greateſt care.

14. Children ought not to be pinched in their food. They require to eat oftener than adults.—If their food be ſimple, and they know that they can have it when hungry, they will ſeldom or never eat more than enough.

15. As ſoon as children can take exerciſe, they ought to be allowed as much as they pleaſe; till then it is the buſineſs of the nurſe to carry and toſs them about.

16. A nurſe ought not only to carry an infant about, but to divert and amuſe it, ſo as to keep it in good humour.

17. An infant ſhould never be ſuffered to cry long and vehemently.

18. Eruptions, or looſeneſs in children, ought not to be ſtopped, but with the greateſt caution.

19. No means ſhould be uſed to force children to ſleep; but they may always be permitted to take as much as they pleaſe.

20. Children ought never to have medicine unleſs they have ſome diſeaſe.

21. Children ſhould neither be ſent too early to ſchool, nor confined to any mechanical employment within doors.

22. Schoolmaſters,

* Children, in general, under two years of age, ought not to be allowed any animal food. Before this period they have not teeth to chew it properly, and at any rate good milk and bread, with a little weak ſoup or broth, or a freſh egg, while they afford enough of nouriſhment, certainly are not ſo heating. Nor ſhould children, in our opinion, till the age of ſeven or eight, be indulged in the free uſe of animal food; after this they may be allowed their freedom, provided the meat be freſh, and not high ſeaſoned.

22. Schoolmaſters, and all who have the care of youth, ſhould allow them plenty of time for exerciſe and diverſions.

23. All children ſhould be nurſed and educated in the country, if poſſible. When that cannot be done, they ought to be carried abroad every day, and kept for a ſufficient time in the open air.

24. The children of delicate and diſeaſed parents muſt be managed with more care than thoſe of the hardy and robuſt.

25. A mother ſhould never abandon her child ſolely to the care of a mercenary nurſe.

Let no one imagine theſe matters unworthy of his attention. On the proper management of children depend not only their health and uſefulneſs in life, but likewiſe the ſafety and proſperity of the ſtate to which they belong. Effeminacy ever muſt prove the ruin of any kingdom; and when its foundations are laid in infancy, it can never afterwards be wholly eradicated. We would therefore recommend to all who wiſh well to their country, to ſtudy every method to render their offspring ſtrong and healthy.

——————————By arts like theſe
Laconia nurs'd of old her hardy ſons;
And Rome's unconquer'd legions urg'd their way,
Unhurt thro' every toil in every clime *.

* Armſtrong on health.

CHAP. II.

OF ADULTS.

HAVING endeavoured to point out ſome of the ſources from which the diſeaſes and mortality of infants proceed, we ſhall next take a view of the more general cauſes of diſeaſes, or ſuch things as endanger the health of mankind in the more advanced periods of life.

Diſeaſes cannot at all times be avoided; yet nothing is more certain than that many of them, and thoſe too of the moſt dangerous nature, are often owing to the want of care. The ſmalleſt cauſes, when neglected, often produce the greateſt effects. This is ſtrictly true with reſpect to diſeaſes. A little care would often prevent what no medicine can cure.

The moſt common cauſe of diſeaſes in this iſland is an obſtructed perſpiration, or what commonly goes by the name of CATCHING COLD. The perſpiration is by far the moſt conſiderable diſcharge from the body; and ſo long as it goes on properly, we have ſeldom any complaints; but when it is obſtructed, the health muſt ſuffer. Men being leſs ſenſible of this than of the other evacuations, are conſequently not ſo attentive to the various cauſes which obſtruct it: We ſhall therefore point out ſome of the moſt conſiderable of them, in order to put people upon their guard.

COM-

COMMON CAUSES OF CATCHING COLD.

Colds are often occaſioned by *ſudden changes* in the *atmoſphere*. There is no country where ſuch changes happen, more frequently than in Britain. The degrees of heat and cold are not only various in the different ſeaſons of the year, but often change from the one extreme to the other, in a few days, and ſometimes even in the courſe of one day: As theſe changes cannot fail to increaſe or diminiſh the perſpiration, they muſt of courſe affect the health.

The beſt method of fortifying the body againſt the *changes* of the *weather* is, to be abroad every day. Thoſe who keep much within doors, are moſt liable to catch cold. Such people feel even the ſlighteſt changes in the atmoſphere, and, by their coughs, pains, and oppreſſions of the breaſt, &c. become a kind of living barometers.

The frequent *changes* of the *weather* ought to make us cautious in changing our apparel. All perſons, but eſpecially the valetudinary, ſhould be careful not to put off their winter-garments too ſoon, nor to wear their ſummer ones too long. The commencement of our warm ſeaſon is ſo uncertain, that a few hot days in April or May, often make us believe ſummer is arrived; when all of a ſudden, the weather ſets in more intenſely cold than at Chriſtmas. The like ſudden changes frequently happen in September or October; and where no care is taken, to guard againſt their influence, the gout, rheumatiſms, fluxes, and fevers, often enſue.

Labourers frequently ſuffer, by not attending to the changes of the weather. They ſtrip to work while it is warm, but neglect to put on their clothes, when it grows cold; ſome are even thoughtleſs

leſs enough to diſregard being wet; ſuch, however, in the end, generally find cauſe to repent their fool-hardineſs.

Nothing more certainly obſtructs the perſpiration, than WET CLOTHES. Nor is the moſt robuſt conſtitution proof againſt their effects. The perſpiration is not only obſtructed by wet clothes, but the moiſture is likewiſe abſorbed, which greatly increaſes the danger.

It is impoſſible for people who go abroad, always to avoid being wet. But the danger might generally be leſſened, if not wholly prevented, by changing their clothes ſoon; when that cannot be done, they ſhould keep in motion till they dry. So far are many from obſerving this rule, that they will ſit, or even lie down in the fields with their clothes wet, and frequently ſleep whole nights in that condition. Every perſon muſt have known inſtances of fevers, rheumatiſms, and even conſumptions, brought on in this way. Though theſe things happen daily, yet they are not ſufficient to deter others from the like conduct.

Even *wet feet* often occaſion fatal diſeaſes. Coughs, inflammations of the breaſt, and ulcers in the lungs, frequently proceed from that cauſe. The cholic, a fit of the gout, the iliac paſſion, and *cholera morbus*, are likewiſe often occaſioned by wet feet. Habit will, no doubt, render this leſs dangerous; but it ought, as far as poſſible, to be avoided. The delicate, and thoſe who are not accuſtomed to have their clothes or feet wet, ſhould be peculiarly careful in this reſpect.

The perſpiration is often obſtructed by NIGHT-AIR; the abſence of the ſun renders it damp and foggy. Even in ſummer, the night-air ought to be avoided. The dews which fall plentifully after the hotteſt day, make the night more dangerous than when the weather is cool. Hence, in warm countries,

countries, the dews are more hurtful, than where the climate is more temperate.

It is very agreeable indeed, after a warm day, to be abroad in the cool evening; but this is a pleaſure to be avoided by all who value their health. The effects of evening-dews are gradual, and almoſt imperceptible; but they are not the leſs to be dreaded: We would therefore adviſe travellers, labourers, and all who are much heated by day, carefully to avoid them. When the perſpiration has been great, theſe become dangerous in proportion: By not attending to this, in flat marſhy countries, where the exhalations and dews are copious, labourers often catch intermitting fevers, quinſies, and the like.

Damp beds ſeldom fail to obſtruct the perſpiration. Beds become damp, either from want of uſe, ſtanding in damp houſes, or in rooms without fire. Nothing is more to be dreaded by travellers than damp beds, which are very common in all places where fuel is ſcarce. When a traveller, cold and wet, arrives at an inn, he may, by means of a good fire, and a dry bed, have the perſpiration reſtored; but if he be put into a cold room, and laid on a damp bed, it will be more obſtructed, and the worſt conſequences muſt enſue. Travellers ſhould avoid inns which are noted for damp beds, as they would a houſe infected with the plague; as no man, however robuſt, is proof againſt the danger ariſing from them.

But inns are not the only places where damp beds are to be met with. Beds kept in private families, for the reception of ſtrangers, are no leſs dangerous. All kinds of linen and bedding, when not frequently uſed, become damp. How, then, is it poſſible, that beds which are not ſlept in above two or three times a-year, ſhould be otherwiſe? Nothing is more common, than to hear of people having

having caught cold, by changing their bed. The reaſon is obvious: Were they careful never to ſleep on a bed, but what was frequently uſed, they would ſeldom find any ill conſequences from a change.

Nothing is more to be dreaded by a delicate perſon, when on a viſit, than being laid in the gueſt-chamber. This ill-judged piece of complaiſance becomes a real injury. All the bad conſequences from this quarter, might be eaſily prevented in private families, by cauſing their ſervants to ſleep in the ſpare beds, and to reſign them to ſtrangers when they come. This is the cuſtom of many families in London, and we would earneſtly recommend it to all who value the health of their friends. In inns where the beds are uſed almoſt every night, nothing elſe is neceſſary than to keep the rooms well ſeaſoned, by frequent fires, and the linen dry *.

Damp houſes frequently produce the like ill conſequences; for this reaſon, thoſe who build ſhould be careful to chuſe a dry ſituation. A houſe which ſtands on a damp marſhy ſoil, muſt be hurtful to the health of the inhabitants. Not only a marſhy ſoil, but the being ſituated in the neighbourhood of large woods, lakes, or ſtanding water, muſt make a houſe damp. Large woods both prevent the free current of air, and ſend forth great quantities of moiſt exhalations, which render all places near them unwholeſome. This is one reaſon

* In travelling, eſpecially on unfrequented roads, our firſt care after arriving at the inn where we are to lodge for the night, ſhould be to inſpect the bed where we are to lie. If we are not ſatisfied, from examination, of the bedding or bed-clothes being perfectly dry, we ought to ſee them well toaſted at the fire, along with the ſheets: when, from want of time or any other accident, we have not had this in our power, we ought to ly with part of our clothes on, or in a wrapper, if we have one. Indeed, I conſider a wrapper, eſpecially a flannel one, as forming a very neceſſary part of a travelling apparatus.

reaſon why new diſcovered countries commonly prove unhealthy, till they be cleared of their woods. Even in England, at this day, there is greatly more planting in ſeveral parts, than is either conducive to the fertility of the ſoil, or the health of its inhabitants. This taſte, inſtead of being any improvement, is the way to reduce the country back to its original ſtate, and to render the climate leſs healthy than it otherwiſe would be.

Cold is not near ſo hurtful to the health as *moiſture*. Cold, in a moderate degree, braces and ſtrengthens the body; but moiſture relaxes and pre-diſpoſes it to diſeaſes. This is the reaſon why intermittents and other fevers are ſo frequent in low damp, marſhy countries, abounding with woods and ſtanding water. This likewiſe ſhews the danger of inhabiting new houſes before they be thoroughly dry. Nothing is more common, than for people, merely to avoid ſome trifling inconveniency, to hazard their lives, by inhabiting a houſe almoſt as ſoon as the maſons, plaiſterers, &c. have done with it: Such houſes are not only dangerous from their dampneſs, but likewiſe from the ſmell of lime, paints, &c. The aſthma's, conſumptions, and other diſeaſes of the lungs, ſo common to people who work in theſe articles, are a plain proof of their being unwholeſome.

Rooms are often rendered damp by an unſeaſonable piece of cleanlineſs; I mean the ridiculous cuſtom of waſhing rooms immediately before company is put into them. Many people are ſure to catch cold, if they ſit but a ſhort while in a room that has been lately waſhed; the delicate ought carefully to avoid ſuch a ſituation, and even the robuſt would run leſs hazard by ſitting without doors. People who are accuſtomed to live in dry houſes, ought, as far as poſſible, to ſhun damp ones,

ones, and by all means not to continue long in rooms that have been lately waſhed.

All houſes, unleſs where the ground is extremely dry, ſhould have the firſt floor a little raiſed. Such ſervants as are obliged to live for the moſt part in cellars and ſunk ſtories, ſeldom continue long in health; and ſurely maſters ought to pay ſome regard to the health of their ſervants as well as to their own.

Even houſes which are built for the poor ought to be dry. Theſe people generally live on the ground-floor, and if it be damp, they muſt ſuffer. This is one cauſe of the aches, cramps, and rheumatic pains, which poor people are ſo ſubject to in the decline of life.

But nothing ſo frequently obſtructs the perſpiration as SUDDEN TRANSITIONS from heat to cold. Colds are ſeldom caught unleſs when people have been too much heated. Heat rarifies the blood, quickens the circulation, and increaſes the perſpiration; but when theſe are ſuddenly checked, the conſequences muſt be bad. It is indeed impoſſible for labourers not to be too hot upon certain occaſions; but it is generally in their power to put on their clothes when they leave off work, to make choice of a dry place to reſt themſelves in, and to avoid falling aſleep in the fields. Theſe eaſy rules, if obſerved, would ſave many uſeful lives.

Nothing is more common than for people when hot, to drink freely of cold ſmall liquors. This conduct is extremely dangerous. Thirſt, indeed, is hard to bear, and the inclination to gratify that appetite frequently gets the better of reaſon, and makes us do what our judgement frequently diſapproves. Every peaſant knows if his horſe be permitted to drink his bellyful of cold water after violent exerciſe, and be immediately put into the ſtable, or ſuffered to remain at reſt, that it will kill

kill him. This he takes the utmoſt care to prevent. It were well if he was equally attentive to his own ſafety.

Thirſt may be quenched many ways without ſwallowing large quantities of cold liquor. The fields afford variety of acid fruits and plants, the very chewing of which would abate thirſt. Water kept in the mouth for ſome time, and ſpit out again, if frequently repeated, will have the ſame effect. If a bit of bread be eat along with a few mouthfuls of water, it will both quench thirſt more effectually, and make the danger leſs. When a perſon is extremely hot, a mouthful of brandy, or other ſpirits, ought to be preferred to any thing elſe, if it can be obtained. But if any one has been ſo fooliſh, when hot, as to drink freely of cold liquour, he ought to continue his exerciſe at leaſt, till what he drank be thoroughly warmed upon his ſtomach.

It would be tedious to enumerate all the bad effects which flow from drinking cold thin liquors when the body is hot. Sometimes it has occaſioned immediate death. Hoarſeneſs, quinſeys, and fevers of various kinds, are its common conſequences. Neither is it ſafe, when warm, to eat freely of raw fruits, ſallads, or the like. Theſe indeed have not ſo ſudden an effect upon the body as cold liquors, but they are notwithſtanding dangerous, and ought to be avoided.

Sitting in a warm room, and drinking hot liquors till the pores are quite open, and immediately going into the cold air, is extremely dangerous. Colds, coughs, and inflammations of the breaſt, are the uſual effects of this conduct: Yet how common is it! Many people, after having drank warm liquors for ſeveral hours, walk or ride a number of miles in the coldeſt night, or ramble about in the ſtreets. Such conduct is one cauſe

why coughs and colds are ſo common in the winter-ſeaſon.

People are very apt, when a room is hot, to throw open a window, and to ſit near it. This is a moſt ready way to catch cold. A delicate perſon had better ſit without doors, than in ſuch a ſituation as the current of air is directed againſt one particular part of the body. Inflammatory fevers and conſumptions have often been occaſioned by ſitting or ſtanding thinly clothed near an open window. Nor is ſleeping with open windows leſs to be dreaded. That ought never to be done, even in the hotteſt ſeaſon. I have known mechanics frequently contract fatal diſeaſes, by working ſtripped at an open window, and would adviſe all of them to beware of ſuch a practice.

Nothing expoſes people more to catch cold than keeping their own houſes too warm; ſuch perſons may be ſaid to live in a ſort of hot-houſes; they can hardly ſtir abroad to viſit a neighbour, but at at the hazard of their lives. Were there no other reaſon for keeping houſes in a moderate degree of warmth, that alone is ſufficient: But no houſe that is too hot can be wholeſome; heat deſtroys the elaſticity of the air, and renders it leſs fit for expanding the lungs, and other purpoſes of reſpiration. Hence it is, that conſumptions, and other diſeaſes of the lungs, prove ſo fatal to people who work in forges, glaſs-houſes, and the like.

Some are even ſo fool-hardy, as to bathe themſelves when hot in cold water. Not only fevers, but madneſs itſelf, has frequently been the effect of this conduct. Indeed it looks too like the action of a madman to deſerve a ſerious conſideration.

We ſhall conclude theſe obſervations on the common cauſes of catching cold, by recommending it to every one to avoid, with the utmoſt attention, all

all ſudden tranſitions from heat to cold *, and to keep the body in as uniform a temperature as poſſible; or, where that cannot be done, to take care to cool gradually.

It may be thought, that too ſtrict an attention to theſe things would tend to render people delicate. So far, however, is this from being our deſign, that the firſt rule laid down for preventing colds, is to harden the body, by enuring it daily to bear the open air.

It is a true ſaying, that colds kill more than plagues. On examining patients, one finds moſt of them impute their diſeaſes either to violent colds, or to ſlight ones which had been neglected. This ſhows the importance of guarding againſt every thing that may obſtruct the perſpiration, and likewiſe of uſing proper means immediately to remove ſuch obſtruction when it does happen. The want of due attention to theſe, coſts Britain annually ſome thouſands of uſeful lives.

OF FOOD.

As our bodies conſiſt of what we eat and drink, unwholeſome food muſt be dangerous. There is no queſtion but the whole conſtitution of body may be changed by diet. This is often done more quickly than people would imagine. A diet conſiſting too much of alkaline ſubſtances, will ſoon render the humours putrid. On the other hand, if acids be uſed too freely, they will receive a taint of an oppoſite nature. The ſolids may be relaxed or weakened by the uſe of oily or watery ſubſtances, or they may be too much conſtricted by eating ſpiceries, auſtere vegetables, &c.

* Tranſitions from cold to heat, though not taken notice of here by the author, are equally dangerous. This is well known in the ſudden application of heat to a part previouſly affected with torpor from cold.

It is not eaſy to aſcertain the exact quantity and quality of food proper for every age, ſex, and conſtitution: But a ſcrupulous nicety here is by no means neceſſary. The beſt rule is to avoid all extremes. Mankind were never intended to weigh and meaſure their food. Nature teaches every creature when it has enough of food, and a very ſmall degree of reaſon is ſufficient for the choice of it. Men ſeldom err in this reſpect through ignorance. The moſt knowing are generally the moſt guilty.

Though *moderation* be the only rule neceſſary with reſpect to the quantity of food, yet the quality of it merits further attention. Many people, if they can ſatisfy the appetites of hunger and thirſt, are very indifferent what they eat or drink. The following obſervations will ſhow the danger of ſuch conduct.

Proviſions may be rendered unwholeſome various ways. Bad ſeaſons may either prevent the ripening of grain, or damage it afterwards. Wet and cold ſummers ſeldom bring the fruits of the earth to maturity; and if the harveſt likewiſe prove rainy, they are often ſo damaged as to be very hurtful. Theſe, indeed, are acts of Providence; it is therefore our duty to ſubmit to them: But ſurely no puniſhment can be too ſevere for thoſe who ſuffer proviſions to be ſpoilt, by hoarding them on purpoſe to enhance the price. The ſoundeſt grain, if kept too long, muſt become unfit for uſe.

The poor are generally the firſt who ſuffer by unſound proviſions: But the lives of the labouring poor are of the greateſt importance to the ſtate. Beſides, diſeaſes occaſioned by unwholeſome food often prove infectious, and by that means reach people in every ſtation. The poor judge ill in buying low-priced and coarſe proviſions. They had better have a ſmaller quantity of what is ſound and good;

as

as that would both afford more nouriſhment, and be attended with leſs danger.

Animal, as well as vegetable food becomes unwholeſome when kept too long. All animal ſubſtances have a conſtant tendency to putrefaction; and when that has proceeded too far, they not only become offenſive to the ſenſes, but hurtful to health. Diſeaſed animals, and ſuch as die of themſelves, ought not to be eaten. It is common enough in graſing countries, for ſervants and poor people to eat ſuch animals as die of any diſeaſe in the ſpring or winter, or are killed by accident. I have been frequently told by people who live in places where this is done, that when much fleſh of that kind is eaten, it never fails to occaſion fevers *.

The injunctions given to the Jews, not to eat any creature which died of itſelf, ſeem to have a ſtrict regard to health, and ought to be obſerved by Chriſtians as well as Jews. Animals never die of themſelves without ſome previous diſeaſe; but how a diſeaſed animal ſhould be wholeſome food, is inconceivable: Even thoſe which die by accident muſt be hurtful, as their blood is mixed with the fleſh, and ſoon turns putrid.

Animals which feed groſsly, as tame ducks, ſwine, &c. are neither eaſily digeſted, nor afford wholeſome nouriſhment. No animal can be wholeſome food which does not take ſufficient exerciſe. Moſt of our ſtalled cattle, hogs, &c. are crammed with groſs food, but not allowed exerciſe or free air; by which means they indeed grow fat, but their humours, not being properly prepared or aſſi-

 mulated,

* In this, our Author muſt have been deceived; for though we are acquainted with many parts of this country where the practice alluded to is common among the lower claſſes, we neither know nor have heard of one ſingle inſtance, where it was attended with any bad conſequences. We ought alſo to obſerve, that the Doctor has thought proper to omit this ſentence in a later edition.

mulated, they muſt remain crude. The fleſh of an animal which has not properly digeſted its own food, can never be eaſily digeſted by another: Yet ſuch are the delicacies of modern luxury, and ſuch the animals daily devoured even by the weak and valetudinary. Is it any wonder that ſuch ſhould complain of crudities, indigeſtions, and oppreſſion of the ſpirits? Let them eat the ſame quantity of an animal which runs wild, and they will not feel any load on their ſtomach, or difficulty of digeſtion. We would not have people live on carrion; but ſurely the oppoſite extreme of eating animals which are gorged with groſs food till they are unfit to live, muſt be as pernicious.

Animals may likewiſe be rendered unwholeſome by being over-heated. Heat cauſes a fever, exhales the ſalts of the animal, and mixes the blood ſo intimately with the fleſh, that it cannot be ſeparated. For this reaſon, people ought not to eat freely of ſuch animals as are hunted down, their fleſh being apt to occaſion putrid fevers. Butchers ſhould alſo be careful not to over-drive their cattle. No perſon would chuſe to eat the fleſh of an animal which had died in a high fever; yet that is the caſe with all over-drove cattle; and the fever is often raiſed even to the degree of madneſs.

No people in the world eat ſuch quantities of animal food as the Engliſh; that is one reaſon why they are ſo generally tainted with the ſcurvy, and its numerous train of conſequences, as indigeſtion, low ſpirits, hypochondriaciſm, &c. Animal food was ſurely deſigned for man, and, with a proper mixture of vegetables, it will be found the moſt wholeſome; but to gorge beef, mutton, pork, fiſh, and fowl, twice or thrice a-day, is certainly too much. All who value health ought to be contented with making one fleſh-meal in the twenty-

four

four hours, and this ought to conſiſt of one kind only *.

The moſt obſtinate ſcurvy has often been cured by a vegetable diet; nay, milk alone will frequently do more in that diſeaſe than any medicine. From hence it is evident, that if vegetables and milk were more uſed in diet, we ſhould have leſs ſcurvy, and likewiſe fewer putrid and inflammatory fevers.

Our aliment ought neither to be too moiſt, nor too dry. Moiſt aliment relaxes the ſolids, and renders the body feeble. Thus we ſee females who live much on tea and other watry diet generally become weak, and unable to digeſt ſolid food; from whence proceed hyſterics, and all their dreadful conſequences. On the other hand, food that is too dry renders the ſolids in a manner rigid, and the humours viſcid, which prediſpoſes the body to inflammatory fevers, ſcurvies, and the like.

The arts of cookery render many things unwholeſome, which are not ſo in their own nature. By jumbling together a number of different ingredients, in order to making a poignant ſauce, or rich ſoup, the compoſition proves almoſt a poiſon. All high ſeaſoning, pickles, &c. are only incentives to luxury, and never fail to hurt the ſtomach. It were well for mankind, if cookery, as an art,

* While we heartily agree with the Doctor in reſtricting people in the uſe of animal food, to one meal in the twenty four hours, we would beg leave to aſſign a ſomewhat different reaſon for this. Though we have heard a great deal of animal food producing the ſcurvy, &c. we are ſtill inclined to think, that, as *animal food*, that is in a ſound and freſh ſtate, it never does ſo: and we know not of a ſingle well authenticated caſe to the contrary. It is only when in a highly ſalted and often putrid ſtate, that it produces this effect;—and it would farther appear, from ſome late obſervations on this ſubject, that freſh animal food proves a powerful and efficacious remedy for the ſcurvy, perhaps equally ſo with freſh vegetables. Our reaſon for the above reſtriction would be this, that thoſe people who are moſt apt to exceed in that reſpect, are ſuch as have leaſt occaſion for that indulgence; namely, the rich and luxurious, whoſe bodily labours certainly do not in general require ſuch full feeding.

were entirely prohibited. Plain roaſting or boiling is all that nature points out, and all that the ſtomach requires. Theſe alone are ſufficient for people in health; and the ſick have ſtill leſs need of a cook.

The liquid part of our aliment likewiſe claims our attention. Water is not only the baſis of moſt liquors, but alſo compoſes a great part of our ſolid food. Good water muſt therefore be of the greateſt importance in diet. The beſt water is that which is moſt pure, and free from any mixture of foreign bodies. Water takes up parts of every body with which it comes in contact; by which means it is often impregnated with metals or minerals of a hurtful or poiſonous nature.

The inhabitants of ſome hilly countries have peculiar diſeaſes, which, in all probability, proceed from the water. Thus the people who live near the Alps in Switzerland, and the inhabitants of the Peak of Derby in England, have large tumours or wains on their necks. This diſeaſe is generally imputed to the ſnow-water; but there is more reaſon to believe it is owing to the minerals in the mountains through which the waters paſs. Were it owing to the ſnow-water, it ſhould happen to the inhabitants of all mountainous countries, where ſnow lies long; but there are many parts of Britain where the ſnow lies much longer than in the Peak of Derby; yet the inhabitants have no ſuch diſeaſe. The Peak of Derby is well known to be a bed of minerals of different kinds; and, as far as what is called the mineral country extends, theſe tumors are common, and generally go by the name of *Derbyſhire-necks*.

When water is impregnated with foreign bodies, this generally appears by its weight, colour, taſte, ſmell, heat, or ſome other ſenſible quality. Our buſineſs, therefore, is to chuſe ſuch water, for common

mon uſe, as is lighteſt, and without any particular colour, taſte, or ſmell. In moſt places of Britain the inhabitants have it in their power to make choice of their water, and few things would contribute more to health than a due attenton to this article. But mere indolence often induces people to make uſe of the water that is neareſt them, without conſidering its qualities.

Before water be brought into great towns, the ſtricteſt attention ought to be paid to its qualities, as epidemic diſtempers are often occaſioned by bad water; and when it has been procured at a great expence, we are unwilling to give it up.

The common methods of rendering water clear by filtration, or ſoft by expoſing it to the ſun and air, &c. are ſo generally known, that it is unneceſſary to ſpend time in explaining them. We ſhall only in general adviſe all to avoid waters which ſtagnate long in ſmall lakes, ponds, or the like; ſuch waters often become putrid with inſects and other vermin, which breed and die in them. Even cattle frequently ſuffer by drinking, in dry ſeaſons, water which has ſtood long in ſmall reſervoirs, without being ſupplied by ſprings, or freſhened with ſhowers. All wells ought to be kept clean, and to have a free communication with the air. When either animal or vegetable ſubſtances are ſuffered to lie at the bottom of wells, they corrupt and taint the water. Even the air itſelf, when confined in wells, becomes poiſonous, and muſt of courſe render the water unwholeſome.

Much noiſe has been made about the uſe of fermented liquors; they notwithſtanding ſtill continue to be the common drink of almoſt every perſon who can afford them. As this is, and in all probability will be the caſe, we ſhall rather endeavour to aſſiſt people in their choice of theſe liquors, than pretend to condemn what cuſtom has eſtabliſhed.

eſtabliſhed. It is not the moderate uſe of ſound fermented liquors which hurts mankind; it is exceſs, or the abuſe of them, and uſing ſuch as are ill-prepared or vitiated.

Fermented liquors which are too ſtrong hurt digeſtion, inſtead of aſſiſting it, by which means their intention is loſt, and the body, in place of being ſtrengthened by them, is weakened and relaxed. Many imagine, that hard labour could not be ſupported without drinking ſtrong liquors: This, though a common, is a very erroneous notion. Men who never taſte ſtrong liquors, are not only able to endure more fatigue, but alſo live much longer, than thoſe who uſe them daily. But ſuppoſe ſtrong liquors did enable a man to do more work, they muſt nevertheleſs waſte the powers of life, and of courſe occaſion premature old age. They keep up a conſtant fever, which waſtes the ſpirits, heats and inflames the blood, and prediſpoſes the body to numberleſs diſeaſes.

But fermented liquors may be too weak as well as too ſtrong: When that is the caſe, they muſt either be drank new, or they become ſour and dead; when ſuch liquors are drank new, the fermentation not being over, they generate air in the bowels, and occaſion flatulencies; and when kept till ſtale, they ſour on the ſtomach, and greatly hurt digeſtion. For this reaſon, all malt liquor, cyder, &c. ought to be of ſuch ſtrength as will make them keep till they be ripe, and then they ſhould be uſed. When ſuch liquors are kept too long, though they ſhould not become ſour, yet they generally contract a hardneſs, which renders them unwholeſome.

All families, who can, ought to prepare their own liquors. Since preparing and vending of liquors became one of the moſt general branches of buſineſs, every method has been tried to adulterate them. The greateſt object both of the makers and venders

venders of liquor is, to render it intoxicating. But it is well known that this may be done by other ingredients than thoſe which ought to be uſed for that purpoſe. It would be imprudent even to name thoſe things which are daily made uſe of to render liquors heady. It is ſufficient to obſerve, that the practice is very common, and all the ingredients uſed for that purpoſe are of a narcotic or ſtupifactive nature. But as all opiates are of a poiſonous quality, it is eaſy to ſee what muſt be the conſequence of their general uſe. Though they do not kill ſuddenly, yet they hurt the nerves, relax and weaken the ſtomach, and of courſe ſpoil the digeſtion.

Were fermented liquors faithfully prepared, not too ſtrong, nor too weak, kept to a proper age, and uſed in moderation, they would prove real bleſſings to mankind. But while they are ill prepared, various ways adulterated, and taken to exceſs, they muſt have many bad conſequences. Theſe, however, we ſhall not mention at preſent, as they will be pointed out under another article.

To ſpecify the different kinds of aliment, to explain their nature and properties, and to point out their effects in different conſtitutions, would far exceed the limits of our deſign. Inſtead of a detail of this kind, which in all probability would be very little attended to, and would not be generally underſtood, we ſhall only mention the following eaſy rules with reſpect to the choice of aliment.

Thoſe whoſe ſolids are weak and relaxed, ought to avoid all viſcid food, or ſuch things as are hard of digeſtion; and to take plenty of exerciſe in a dry open air*.

Such as abound with blood ſhould be ſparing in the uſe of every thing that is highly nouriſhing, as fat

* People of a weak relaxed habit ſhould live moſtly on animal food. This, too, will anſwer beſt when uſed in its juicy and ſavoury ſtate, as roaſted, or in the form of ſtakes. Much vegetable food, or even ſoups and broths, are not ſo proper here.

fat meat, rich wines, ſtrong ale, &c. Their food ſhould conſiſt moſtly of bread and other vegetable ſubſtances; and their drink ought to be water, whey, and the like.

Fat people ſhould not eat freely of oily nouriſhing diet. They ought frequently to uſe raddiſh, garlic, ſpices, or ſuch things as are heating, and promote perſpiration and urine. Their drink ſhould be water, coffee, tea, or the like; and they ought to take much exerciſe and little ſleep.

Thoſe who are too lean muſt follow an oppoſite courſe.

Such as are affected with acidities, or whoſe food is apt to ſour on their ſtomach, ſhould live much on fleſh-meats; and thoſe who are troubled with alkaline eructations, or heat of the ſtomach, ought to uſe a diet conſiſting chiefly of acid vegetables.

People who are affected with the gout, low ſpirits, hypochondriac, or hyſteric diſorders, ought to avoid all flatulent food, every thing that is viſcid, or hard of digeſtion, all ſalted or ſmoke-dried proviſions, and whatever is auſtere, acid, or apt to ſour on the ſtomach. Their food ſhould be light, ſpare, cool, and of an opening quality.

The diet ought not only to be ſuited to the age and conſtitution, but alſo to the manner of life. A ſedentary and ſtudious perſon ſhould live more ſparingly than one who labours hard without doors. Food will nouriſh a peaſant very well, which would be almoſt indigeſtible to a citizen; and the latter will live upon a diet on which the former would ſtarve.

Diet ought not to be too uniform. The conſtant uſe of one kind of food might have bad effects. Nature points out this by the great variety of aliments which ſhe has provided for man, and likewiſe by giving him an appetite for different kinds of food.

Thoſe

Thoſe who labour under any particular diſeaſe, ought to avoid ſuch aliments as have a tendency to increaſe it: For example, a gouty perſon ſhould not uſe rich wines, ſtrong ſoups, or gravies, and ſhould avoid all acids. One who is troubled with the gravel, ought to ſhun all auſtere and aſtringent aliments; and thoſe who are ſcorbutic ſhould not indulge in animal food *, &c.

In the firſt period of life, our food ought to be light, nouriſhing, and of a diluting nature, but frequently uſed. Food that is ſolid, with a ſufficient degree of tenacity, is moſt proper for the ſtate of manhood. The diet ſuited to the laſt period of life, when nature is upon the decline, approaches near to that of the firſt. It ſhould be lighter, and more deluting than that of vigorous age, and likewiſe more frequently taken.

IRREGULARITIES IN DIET, SLEEP, &c.

It is not only neceſſary for health, that our diet be wholeſome, but alſo that it be taken at regular periods. Some imagine, that long faſting will atone for exceſs; but that, inſtead of mending the matter, never fails to make it worſe. When the ſtomach and inteſtines are over diſtended with food, they loſe their proper tone, and by long faſting they become weak, and inflated with wind. Thus either gluttony or faſting deſtroys the powers of digeſtion.

The frequent repetition of aliment is not only neceſſary for repairing the continual waſte of our bodies, but likewiſe to keep the humours ſound and ſweet. Our humours, even in the moſt healthy ſtate, have a conſtant tendency to become putrid,

* See a former note on this ſubject.

trid, which can only be prevented by frequent ſupplies of freſh nouriſhment: When that is wanting too long, the putrefaction often proceeds ſo far, as to occaſion very dangerous fevers. From hence we may learn the neceſſity of regular meals. No perſon can enjoy a good ſtate of health, whoſe veſſels are either frequently overcharged, or the humours long deprived of freſh ſupplies of chyle.

Long faſting is extremely hurtful to young people; it vitiates their humours, and prevents their growth and ſtrength. Nor is it leſs injurious to the aged. Many in the decline of life are afflicted with wind: That complaint is not only increaſed, but even rendered dangerous, and often fatal, by long faſting. Old people, when their ſtomachs are empty, are frequently ſeized with giddineſs, headachs, and faintneſs. Theſe complaints may generally be removed by a bit of bread, and a glaſs of wine, or taking any other ſolid food; which plainly points out the method of preventing them. It is more than probable, that many of the ſudden deaths which happen in the advanced periods of life, are occaſioned by faſting too long, as it exhauſts the ſpirits, and fills the bowels with wind; we would therefore adviſe people in the decline of life, never to allow their ſtomachs to be too long empty. Many take nothing but a few cups of tea, and a bit of bread, till two or three next afternoon. Such may be ſaid to faſt almoſt three fourths of their time. This can hardly fail to ruin the appetite, vitiate the humours, and fill the bowels with wind; all which might be prevented by a ſolid breakfaſt. That would tend more to ſtrengthen the nerves, and expel wind, than all the cordial or carminative medicines which can be adminiſtered.

The ſtrong and healthy do not indeed ſuffer ſo much from faſting as the weak and delicate; but they

they run great hazard from its oppoſite, *viz.* repletion. Many diſeaſes, eſpecially fevers, are the effect of a plethora, or too great fulneſs of the veſſels. Strong people, in high health, have generally a great quantity of blood and other humours. When theſe are ſuddenly increaſed by an overcharge of rich and nouriſhing diet, the veſſels become diſtended, and, being unable to contract themſelves, obſtructions and inflammations enſue. Hence ſo many people are ſeized with inflammatory and eruptive fevers, after a feaſt or debauch. This ſhows the danger of all ſudden tranſitions from a ſpare to a full and luxurious diet.

Exceſs in diet is not peculiar to the rich and opulent; the poor are often guilty of it, and frequently feel its bad effects. The poor ſeldom loſe an opportunity of gorging themſelves either with meat or drink, when they can obtain it; and the leſs they are accuſtomed to it, the danger is the greater.

When we recommend regularity of diet, we would not be underſtood as condemning every ſmall deviation from it. It is next to impoſſible for people at all times to avoid ſome degree of exceſs; and living too much by rule might make even the ſmalleſt deviation dangerous. It may therefore be prudent to vary a little, ſometimes taking more, ſometimes leſs than the uſual quantity of meat and drink, provided always that regard be had to moderation.

Sleep, as well as diet, ought to be duly regulated. Too little ſleep exhauſts the ſpirits, weakens the nerves, and occaſions diſeaſes; and too much renders the mind dull, the body groſs, and diſpoſes it to apoplexies, lethargies, &c. A medium, therefore, ought to be obſerved, but is not eaſy to fix. The young require more ſleep than thoſe who are grown, the laborious than the idle, and ſuch as eat and drink freely, than thoſe who live abſtemiouſly. Beſides, the real quantity of ſleep cannot be meaſured

ſured by time; as one perſon will be more refreſhed by five or ſix hours of ſleep, than another by eight or ten. The beſt way to make ſleep ſound and refreſhing, is to riſe betimes. The indolent cuſtom of lolling a-bed for nine or ten hours relaxes the body, unbraces the nerves, and greatly hurts the conſtitution.

Children may be allowed as much ſleep as they chuſe; but for adults ſix or ſeven hours is certainly enough, and none ought to exceed eight. Thoſe who lie more than eight hours a-bed, may ſlumber, but they can hardly be ſaid to ſleep; ſuch generally toſs and dream away the fore-part of the night, ſink to reſt towards morning, and doſe till noon.

Nature points out night as the proper time for ſleep. Thoſe who think it too vulgar to ſleep in that ſeaſon, ſeldom enjoy health. Nothing more certainly deſtroys the conſtitution, than night-watching. It is great pity that a practice ſo deſtructive to health ſhould be ſo much in faſhion. How quickly the want of reſt in due ſeaſon will blaſt the moſt blooming complexion, or ruin the beſt conſtitution, is evident from the ghaſtly countenances of thoſe who, as the phraſe is, turn day into night, and night into day.

To make ſleep refreſhing, the following things are neceſſary. Firſt, Take enough of exerciſe in the open air, through the day; next, Eat a light ſupper; and, laſtly, Lie down with a mind chearful and ſerene.

It is certain, that too much fatigue will prevent ſleep, as well as too little. We ſeldom, however, hear the active and laborious complain of reſtleſs nights. It is the indolent and ſlothful who generally have theſe complaints. Is it any wonder that a bed of down ſhould not be refreſhing to a perſon who lolls all day in an eaſy chair? A great part

part of the pleaſure of life conſiſts in alternate reſt and motion; but they who neglect the latter can never reliſh the former. The labourer enjoys more true luxury in plain food and ſound ſleep, than is to be found in ſumptuous tables and downy pillows, where exerciſe is wanting.

That light ſuppers cauſe ſound ſleep, is true even to a proverb. Many, if they exceed the leaſt at that meal, are ſure to have uneaſy nights; and if they drop aſleep, the load and oppreſſion on their ſtomach and ſpirits occaſion frightful dreams, broken and diſturbed repoſe, with night mares, &c. Were the ſame perſons to go to bed with a light ſupper, or ſit up till what they ate were pretty well digeſted, they might enjoy ſound ſleep, and riſe refreſhed and chearful.

Nothing more certainly diſturbs our repoſe than anxiety. When the mind is not at eaſe, we ſeldom enjoy ſound ſleep. That greateſt of human bleſſings often flies the wretch who needs it moſt, and viſits the happy, the chearful, and the gay. This is a good reaſon why every man ſhould endeavour to be as eaſy in his mind as poſſible, when he goes to reſt. Many, by neglecting this rule, and by indulging grief and anxious thoughts, have baniſhed ſleep ſo long, that they could never afterwards enjoy it.

Few things contribute more to health than keeping the *belly regular*. When the fœces lie too long in the bowels, they become acrid, and ſpoil the humours; and when they are diſcharged too ſoon, the body is not properly nouriſhed. Regular ſtools depend greatly upon regularity in eating and drinking, and proper exerciſe; people have reaſon to ſuſpect a fault in one or other of theſe, whenever the belly is not regular.

To prevent coſtiveneſs, one good rule is, to riſe betimes, and go abroad in the open air. Not only

the poſture in bed is unfavourable to regular ſtools, but likewiſe the warmth. This, by promoting the perſpiration, cannot fail to leſſen all the other diſcharges. Mr Locke's advice, to ſolicit nature by going regularly to ſtool every morning, is a very good one, and has more effect than moſt people would imagine. Any habit will in time become natural. It is always more ſafe to keep the belly regular by proper diet, exerciſe, &c. than by the uſe of drugs *. Thoſe who have frequent recourſe to medicine for that purpoſe, ſeldom fail to ruin their conſtitutions. But if opening medicines muſt be uſed, the ſafeſt is fine rhubarb, which may either be taken in ſmall doſes in powder, or a little of it chewed daily. Cuſtom will render this ſufficiently agreeable.

Such as are troubled with habitual looſeneſs, ought to ſuit their food to the nature of their complaint. Looſeneſs may often be removed by a change of diet: For example, boiled milk may be uſed in place of raw, wheat bread inſtead of that which is mixed, red wine, or brandy and water, may be drank in place of malt-liquor, white broths may be eat inſtead of fleſh, and rice or ſago gruels, with light flour puddings, in place of barley or oat-meal. An habitual looſeneſs is often occaſioned by an obſtructed perſpiration. In that caſe a flannel veſt and thick ſhoes are the beſt medicines.

OF

* This purpoſe may be often anſwered very completely, by uſing conſtantly bread made from the bran, or coarſeſt part of the flour, or even by uſing a ſpecies of bread made from the coarſe and fine flour ground together.

OF AIR.

Bad air is a very common cauſe of diſeaſes. Few are aware of the danger ariſing from it; people generally pay ſome attention to what they eat and drink, but ſeldom regard what goes into the lungs, though the one often proves fatal as well as the other.

Perhaps no air is perfectly pure; that, however, which has feweſt noxious particles in it, is no doubt the beſt. Air as well as water takes up part of moſt bodies with which it comes into contact, and is often ſo repleniſhed with thoſe of a noxious quality, as to occaſion immediate death. But ſuch violent effects ſeldom happen, as people are generally on their guard againſt them. The leſs perceptible influences of bad air prove more hurtful to mankind; we ſhall therefore endeavour to point out ſome of theſe, and to ſhow wherein the danger conſiſts.

Air may become noxious many ways. Whatever deſtroys its ſpring or elaſticity, renders it unfit for reſpiration: Wherever, therefore, great numbers of people are crowded into one place, if the air has not a free current, it ſoon becomes unwholeſome *. Hence it is, that delicate perſons are ſo apt to faint or be ſick, in crowded churches, aſſemblies, or any place where the air is exhauſted by breathing, fires, candles, or the like.

* Atmoſpheric air is now aſcertained to be compoſed of two different ingredients, namely, vital air and azotic air, or gas, in the proportion of ſomewhat more than one fourth of the former, to three-fourths of the latter. It is the firſt of theſe only, or vital air, that contributes to reſpiration; and as part of this is conſtantly abſorbed in every inſpiration, the remaining air ſoon becomes unfit for breathing, if a current of freſh air be not admitted to ſupply this conſtant waſte. From this cauſe, and not from the want of elaſticity, proceeds the noxious qualities of the air in crowded aſſemblies, &c.

In great cities, ſo many things tend to pollute the air, that it is no wonder it proves ſo fatal to the inhabitants. The air in cities is not only breathed over and over by thouſands, but is likewiſe exhauſted by fires, loaded with ſulphur, ſmoke, and other exhalations, beſides the vapours continually ariſing from innumerable putrid ſubſtances. All poſſible care ſhould be taken to keep the ſtreets of large towns open and wide, that the air may have a free current. They ought likewiſe to be kept very clean. Nothing tends more to pollute and contaminate the air than dirty ſtreets, dunghills, ſlaughter-houſes, &c.

It is very common in this country to have churchyards in the middle of populous cities. Whether this be the effect of ancient ſuperſtition, or owing to the increaſe of ſuch towns, is a matter of no conſequence. Whatever gave riſe to the cuſtom, it is a bad one. It is habit alone which reconciles us to theſe things; by means of it the moſt ridiculous, nay, pernicious cuſtoms, often become ſacred. Certain it is, that thouſands of putrid carcaſes, ſo near the ſurface of the earth, in a place where the air ſtagnates, cannot fail to taint it; and that ſuch air, being breathed into the lungs, and mixed with the blood, muſt occaſion diſeaſes *.

Wherever air ſtagnates long, it becomes unwholeſome. Hence the unhappy inmates of jails not only contract malignant fevers themſelves, but often communicate them to others. Nor are many of the holes, for we cannot call them houſes, poſſeſſed by the poor in great towns, much better than jails. Theſe low dirty habitations are the very lurking places of bad air and contagious diſeaſes.

* In moſt eaſtern countries, it is cuſtomary to bury the dead at ſome diſtance from any town. It were to be wiſhed the inhabitants of Europe would follow this example.

eaſes. Such as live in them ſeldom enjoy good health; and their children commonly die young. In the choice of a houſe, the greateſt attention ought always to be paid to free air.

The various methods which luxury has invented to make houſes cloſe and warm, contribute not a little to render them unwholeſome. No houſe can be wholeſome, unleſs the air has a free paſſage through it. For which reaſon, houſes ought daily to be ventilated by opening oppoſite windows, and admitting a current of freſh air into every room. This would expel any noxious vapour, and could not fail to promote the health of the inhabitants. In hoſpitals, jails, ſhips, &c. where that cannot be conveniently done, ventilators ſhould be uſed. The method of expelling foul, and introducing freſh air, by means of ventilators, is a moſt ſalutary invention, and is indeed the moſt uſeful of all our modern medical improvements. We wiſh, for the benefit of mankind, it were more generally regarded. It is capable of univerſal application, and fraught with numerous advantages, both to thoſe in health and ſickneſs.

Air not only loſes its ſpring, and becomes unwholeſome from heat and ſtagnation, but likewiſe from moiſture. Thus, in low marſhy countries, the air is generally bad, as alſo in countries overrun with wood, or any thing that ſends forth moiſt exhalations.

Air that ſtagnates in mines, wells, cellars, &c. muſt be noxious. That kind of air is to be avoided as the moſt deadly poiſon. It often kills almoſt as quick as lightning. For this reaſon, people ſhould be very cautious in opening cellars that have been long ſhut, or going down into deep wells, eſpecially if they have been cloſe covered *.

* Before going down to ſuch places as theſe, it is a proper precaution to let down a lighted candle, and obſerve if it go out; as we

Many people who have ſplendid houſes, chuſe to ſleep in ſmall apartments. This conduct is very imprudent. A bed-chamber ought always to be well aired, as it is generally occupied in the night only, when all doors and windows are ſhut. If a fire be kept in it, the danger becomes ſtill greater. Many have been ſtifled when aſleep by a fire in a ſmall apartment. Some are even ſo inconſiderate as to make fires in bed-chambers which have no chimneys, and imagine, by uſing that kind of coal which has little or no ſmoke, that they are ſafe; whereas the danger becomes thereby the greater, ſuch coal generally abounding with ſulphur. The moſt fatal conſequences are always to be dreaded from every attempt of this nature.

Thoſe who are obliged, on account of buſineſs, to ſpend the day in cloſe towns, ought, if poſſible, to ſleep in the country. Breathing good air in the night will, in ſome meaſure, make up for the want of it through the day. This practice would have a greater effect in preſerving the health of citizens than is commonly imagined.

Care ſhould be taken to admit a conſtant ſtream of freſh air into all crowded places, as churches, aſſembly-rooms, colleges, courts of juſtice, &c. The neglect of this has had ſo many fatal conſequences, that it is ſufficient only to mention it.

It was neceſſary in former times, for ſafety, to ſurround cities, colleges, and even ſingle houſes, with high walls. Theſe, by obſtructing the current of air, never fail to render ſuch places damp and unwholeſome. As ſuch walls are now, generally ſpeaking, become uſeleſs, they ought to be thrown down, and every method taken to admit a free paſſage to the air. Were proper attention paid to AIR and CLEANLINESS, it would tend more to

we may be aſſured, that the ſame air that is unfit for combuſtion, is equally unfit for reſpiration.

to preſerve the health of the inhabitants of great towns than all the endeavours of the Faculty.

If freſh air be neceſſary for thoſe in health, it is ſtill more ſo for the ſick, who often loſe their lives for want of it. The notion that ſick people muſt be kept very hot, is ſo common, that one can hardly enter the chamber where a patient lies, without being ready to faint, by reaſon of the hot ſuffocating ſmell. How this muſt affect the ſick, any one may judge. No medicine is ſo beneficial to the ſick as freſh air. It is the moſt reviving of all cordials, if it be adminiſtered with prudence. We are not, however, to throw open doors and windows at random upon the ſick. Freſh air is to be let into the chamber gradually, and, if poſſible, by opening the windows of ſome other apartment.

The air of a ſick perſon's chamber may be greatly freſhened, and the patient much revived, by ſprinkling the floor, bed, &c. frequently with vinegar, juice of lemon, or any other ſtrong vegetable acid.

In places where numbers of ſick are crowded into the ſame houſe, or, which is often the caſe, into the ſame apartment, freſh air becomes abſolutely neceſſary. Infirmaries, hoſpitals, &c. often become ſo noxious for want of proper ventilation, that the ſick run more hazard from them than from the diſeaſe; this is particularly the caſe when dyſenteries, putrid fevers, or other infectious diſeaſes prevail.

Phyſicians, ſurgeons, and others who attend hoſpitals, ought, for their own ſake, to take care that they be properly ventilated. They are obliged to ſpend much of their time amongſt the ſick, and run great hazard of being themſelves infected when the air is bad. All hoſpitals, and places for the ſick, ought to have an open ſituation, at ſome diſtance from any great town.

OF CLEANLINESS.

The want of cleanlineſs is a fault which admits of no excuſe. Where water can be had for nothing, it is ſurely in the power of every perſon to be clean. The continual diſcharge from our bodies by perſpiration renders frequent changes of apparel neceſſary. Change of apparel greatly promotes the ſecretion from the ſkin, ſo neceſſary for health. When that matter, which ought to be carried off by perſpiration, is either retained in the body, or re-abſorbed from dirty clothes, it is apt to occaſion diſeaſes.

Moſt diſeaſes of the ſkin proceed from want of cleanlineſs *. They may indeed be caught by infection; but they will ſeldom continue long where cleanlineſs prevails. To the ſame cauſe muſt we impute the various kinds of vermin which infeſt the human body, houſes, &c. Theſe may generally be baniſhed by cleanlineſs alone Perhaps the intention of Nature, in permitting ſuch vermin to annoy mankind, is to induce them to the practice of this virtue.

One common cauſe of putrid and malignant fevers is the want of cleanlineſs. Theſe fevers commonly begin among the inhabitants of cloſe, dirty houſes, who breathe bad air, take little exerciſe, uſe unwholeſome food, and wear dirty clothes. There the infection is generally hatched, which often ſpreads far and wide, to the deſtruction of many. Hence cleanlineſs may be conſidered as an object of public attention. It is not ſufficient that

* The diſeaſe deſcribed by Mr Pott, under the name of the Chimney-ſweepers Cancer, is with much probability imputed by the Author to this cauſe: And as it occurs only in people that are employed in working among ſoot, it is therefore natural to conclude, that it might be altogether prevented by a proper attention to cleanlineſs.

I be clean myſelf, while the want of it in my neighbour affects my health as well as his own. If dirty people cannot be removed as a common nuiſance, they ought at leaſt to be avoided as infectious. All who regard their health ſhould keep at a diſtance even from their habitations.

In places where great numbers of people are collected, cleanlineſs becomes of the utmoſt importance. It is well known, that infectious diſeaſes are communicated by tainted air. Every thing, therefore, which tends to pollute the air, or ſpread the infection, ought, with the utmoſt care, to be avoided. For this reaſon, in great towns, no filth of any kind, ſhould be permitted to lie upon the ſtreets. Nothing is more apt to convey infection than the excrements of the diſeaſed. Theſe, in many caſes, are known to be highly infectious. The ſtreets in many great towns are little better than dunghills, being frequently covered with aſhes and naſtineſs of every kind. How eaſily might this be prevented by active magiſtrates, who have it always in their power to make proper laws relative to things of this nature, and to enforce the obſervance of them?

We are ſorry to ſay, that the importance of general cleanlineſs does by no means ſeem to be ſufficiently underſtood. It were well if the inhabitants of Britain would imitate their neighbours the Dutch in the cleanneſs of their ſtreets, houſes, &c. Water, indeed, is eaſily obtained in Holland; but the ſituation of moſt towns in Britain is more favourable to cleanlineſs. Nothing can be more agreeable to the ſenſes, more to the honour of the inhabitants, or conducive to their health, than a clean town; nor does any thing impreſs a ſtranger ſooner with a diſreſpectful idea of any people, than its oppoſite.

The peaſants in moſt countries ſeem to hold cleanlineſs

cleanlineſs in a ſort of contempt. Were it not for the open ſituation of their houſes, they would often feel the bad effects of this diſpoſition. One ſeldom ſees a farm-houſe without a dunghill before the door, and frequently the cattle and their maſters lodge under the ſame roof. Peaſants are likewiſe extremely careleſs with reſpect to change of apparel, keeping their ſkins clean, &c. Theſe are merely the effects of indolence and a dirty diſpoſition. Habit may indeed render them leſs diſagreeable; but no habit can ever make it ſalutary to wear dirty clothes, or breathe unwholeſome air.

In camps the ſtricteſt regard ſhould be paid to cleanlineſs. By negligence in this matter, infectious diſeaſes are often ſpread amongſt a whole army; and frequently more die of theſe than by the ſword. The Jews, during their encampments in the wilderneſs, received particular inſtructions with reſpect to cleanlineſs*. The rules enjoined them ought to be obſerved by all in the like ſituation. Indeed the whole ſyſtem of laws delivered to that people, has a manifeſt tendency to promote cleanlineſs. Whoever conſiders the nature of their climate, and the diſeaſes to which they were liable, will ſee the propriety of ſuch laws.

It is remarkable, that in moſt eaſtern countries cleanlineſs makes a great part of their religion. The Mahometan, as well as the Jewiſh religion, enjoins various bathings, waſhings, and purifications. No doubt theſe were deſigned to repreſent inward purity; but they are at the ſame time calculated for the preſervation of health. However whimſical theſe waſhings may appear to ſome, few things would tend more to prevent diſeaſes than a proper

* Thou ſhalt have a place alſo without the camp, whither thou ſhalt go forth abroad; and thou ſhalt have a paddle upon thy weapon: and it ſhall be, when thou ſhalt eaſe thyſelf abroad, thou ſhalt dig therewith, and ſhalt turn back, and cover that which cometh from thee, &c. Deut. xxiii. 12. 13.

proper attention to many of them. Were every perſon, for example, after handling a dead body, viſiting the ſick, &c. to waſh before he went into company, or ſat down to meat, he would run leſs hazard either of catching the infection himſelf, or communicating it to others.

Frequent waſhing not only removes the filth and ſordes which adhere to the ſkin, but likewiſe promotes the perſpiration, braces the body, and enlivens the ſpirits. Even waſhing the feet tends greatly to preſerve health. The ſweat and dirt with which theſe parts are frequently covered, cannot fail to obſtruct the perſpiration. This piece of cleanlineſs would often prevent colds and fevers. Were people careful to bathe their feet and hands in warm water at night, after being expoſed to cold or wet through the day, they would ſeldom experience any of the fatal effects which often proceed from theſe cauſes.

A proper attention to cleanlineſs is no where more neceſſary than on ſhip-board. If epidemical diſtempers break out there, no one can be ſafe. The beſt way to prevent them is to take care that the whole company be cleanly in their clothes, diet, &c. When infectious diſeaſes do break out, cleanlineſs is the moſt likely means to prevent their ſpreading. Above all things, the clothes, bedding, &c. of the ſick, ought to be carefully waſhed, and fumigated with brimſtone, or the like *. Infection will lodge a long time in dirty clothes, and will afterwards break out in the moſt terrible manner.

In places where great numbers of ſick people are kept, cleanlineſs ought moſt religiouſly to be obſerved. The very ſmell in ſuch places is often ſufficient to make one ſick. It is eaſy to imagine what

* Fumigation with nitrous acid has been found a very effectual preſervative from infection.

what effect that is likely to have upon the diſeaſed. A perſon in perfect health has a greater chance to become ſick, than a ſick perſon has to get well, in an hoſpital or infirmary, where cleanlineſs is neglected.

The brutes themſelves ſet us an example of cleanlineſs. Moſt of them ſeem uneaſy, and thrive ill, if they be not kept clean. A horſe that is kept thoroughly clean will thrive better on a ſmaller quantity of food, than with a greater where cleanlineſs is neglected. Even our own feelings are a ſufficient proof of the neceſſity of cleanlineſs. How refreſhed, how chearful, and agreeable, does one feel on being ſhaved, waſhed, and dreſſed, eſpecially when theſe offices have been long neglected? Moſt people eſteem cleanlineſs; and even thoſe who do not practiſe it themſelves often admire it in others. Superior cleanlineſs ſooner attracts our regard than even finery itſelf, and often gains eſteem where the other fails.

To point out the numerous advantages ariſing from cleanlineſs of perſon, houſes, ſtreets, &c. would be a very uſeful and agreeable taſk; but as our plan only permits us to name things, we muſt conclude this article by recommending the practice of that virtue to people of all ſtations and conditions in life. We do not indeed pretend to rank cleanlineſs amongſt the *cardinal virtues;* but we would recommend it as neceſſary for ſupporting the dignity of human nature, as uſeful and agreeable to ſociety, and as highly conducive to health *.

INTEM-

* Moſt unfortunately, a prejudice prevails very generally, eſpecially in country places, againſt cleanlineſs, ſimilar to that which was taken notice of before in reſpect of freſh air. If the admiſſion of freſh air be reckoned dangerous, or even hurtful to the ſick, the change of body or bed-linen, in the ſame ſituation, is conſidered as at leaſt equally hurtful. Nothing, however, we may obſerve, tends more to the comfort and relief of a patient. Indeed, if a frequent change of linen be indiſpenſably neceſſary in health, it becomes

INTEMPERANCE.

A MODERN author * obſerves, that temperance and exerciſe are the two beſt phyſicians in the world. He might have added, that if theſe were duly regarded, there would be little occaſion for any other. Temperance may juſtly be called the parent of health; but numbers of mankind act as if they thought diſeaſes and death too ſlow in their progreſs, and by intemperance and debauch ſeem, as it were, to ſolicit their approach.

The danger of intemperance appears from the very conſtruction of the human body. Health depends on that ſtate of the ſolids and fluids, which fits them for the due performance of the vital functions; and ſo long as theſe go regularly on, we are ſound and well; but whatever diſturbs them neceſſarily impairs health. Intemperance never fails to diſorder the whole animal œconomy; it ſpoils the digeſtion, relaxes the nerves, renders the different ſecretions irregular, vitiates the humours, and of courſe occaſions diſeaſes.

The analogy between the nouriſhment of plants and animals affords a ſtrong proof of the danger of intemperance. Moiſture and manure greatly promote vegetation; but an over-quantity of either will entirely prevent it. The beſt things become hurtful, nay deſtructive, when carried to exceſs. Hence we learn, that the greateſt pitch of human wiſdom conſiſts in regulating our appetites and paſſions, ſo as to avoid all extremes. It is this alone which entitles us to the character of rational beings.

The

becomes peculiarly ſo under diſeaſe, where, from the confinement and warmth, as well as frequently from the nature of the diſeaſe, the diſcharge by the ſkin is increaſed, while at the ſame time, from the increaſed irritability of the ſyſtem, the ſame ſtrength of impreſſion will produce two or three times the effect.

* Rouſſeau.

The ſlave of appetite will ever be the diſgrace of human nature.

The Author of nature hath endued us with various paſſions, for the propagation of the ſpecies, the preſervation of the individual, &c. Intemperance is the abuſe of theſe paſſions; and in the proper regulation of them moderation conſiſts. Men, not content with ſatisfying the ſimple calls of nature, create artificial wants, and are perpetually in ſearch after ſomething that may gratify them; but imaginary wants can never be gratified. Nature is content with a little, but luxury knows no bounds. The epicure, the drunkard, and the debauchee, ſeldom ſtop in their career, till their money or conſtitution fail: Then, indeed, they generally ſee their error when too late.

It is impoſſible to lay down determined rules of temperance, on account of the different conſtitutions of mankind. The moſt ignorant perſon, however, certainly knows what is meant by exceſs; and it is in the power of every man to avoid it, if he chuſes. The great rule in regulating our diet, is to ſtudy ſimplicity. Nature delights in the moſt plain and ſimple food; and every animal, except man, follows her dictates. Man alone riots at large, and ranſacks the whole creation in queſt of luxuries, to his own deſtruction. An elegant writer * of the laſt age ſpeaks thus of intemperance: "For my part, when I behold a faſhionable table ſet out in all its magnificence, I fancy that I ſee gouts and dropſies, fevers and lethargies, with other innumerable diſtempers, lying in ambuſcade among the diſhes."

Intemperance does not hurt its votaries alone; the innocent too often feel the direful effects of it. How many wretched orphans are to be ſeen embracing dunghills, whoſe parents, regardleſs of the future,

* Addiſon.

future, ſpent in riot and debauch what might have ſerved decently to feed and clothe their offspring! How often do we behold the miſerable mother, with her helpleſs infants, pining in want, while the cruel father is indulging even at the expence of their lives!

Families are not only reduced to miſery, but extirpated, by means of intemperance. Nothing tends ſo much to prevent propagation, and to ſhorten the lives of children. The poor man who labours all day, and at night lies down contented with his humble fare, can boaſt a numerous offspring, while his pampered lord, ſunk in eaſe and luxury, has neither ſon nor nephew. Even ſtates and empires feel the influence of intemperance, and riſe or fall as it prevails.

Inſtead of mentioning the different kinds of intemperance, and pointing out their influence upon health, we ſhall confine our obſervations to one particular ſpecies of that vice, viz. the abuſe of intoxicating liquors.

Every act of intoxication puts nature to the expence of a fever, in order to diſcharge the ſuperfluous load; but when that is repeated almoſt every day, it is eaſy to foreſee the conſequences. That conſtitution muſt be ſtrong indeed, which is able long to hold out under a daily fever! But fevers occaſioned by drinking do not always go off in a day; they frequently end in an inflammation of the breaſt, liver, or brain, and produce fatal effects.

Though the drunkard ſhould not fall by an acute diſeaſe, he ſeldom eſcapes thoſe of a chronic nature. Intoxicating liquors, when uſed to exceſs, weaken the bowels, and ſpoil the digeſtion; they deſtroy the power of the nerves, and occaſion paralytic and convulſive diſorders; they heat and inflame the blood, deſtroy its balſamic quality, render it

it unfit for circulation, and the nouriſhment of the parts, &c. Hence obſtructions, atrophies, dropſies, and conſumptions of the lungs. Theſe are the common ways in which drunkards make their exit. Diſeaſes of this kind, when brought on by hard drinking, ſeldom admit of a cure.

Many people injure their health by drinking, who ſeldom get drunk. The continual habit of ſoaking, as it is called, though its effects be not ſo violent, is no leſs pernicious. When the veſſels are kept conſtantly full, and upon the ſtretch, the different digeſtions can neither be duly performed, nor the humours properly prepared. Hence moſt people of this character are afflicted with the gout, the gravel, ulcerous ſores in the legs, &c.; if theſe diſorders do not appear, they are ſeized with low ſpirits, hypochondriacal diſorders, and other ſymptoms of indigeſtion.

All intoxicating liquors may be conſidered as poiſons. However diſguiſed, that is their real character, and, ſooner or later, they will have their effect. Conſumptions are now ſo common, that it is thought one tenth of the inhabitants of great towns die of that diſeaſe. Drunkenneſs is one of the cauſes to which we muſt impute the increaſe of conſumptions. The great quantities of viſcid malt-liquor drank by the common people of England, cannot fail to render the blood ſizy, and unfit for circulation; from whence proceed obſtructions and inflammations of the lungs. There are few great ale-drinkers who are not phthiſical; nor is that to be wondered at, conſidering the glutinous and almoſt indigeſtible nature of ſtrong ale. Thoſe who drink ardent ſpirits, or ſtrong wines, do not run leſs hazard; theſe liquors heat and inflame the blood, and tear the tender veſſels of the lungs in pieces.

The habit of drinking proceeds frequently from misfortunes

misfortunes in life. The miſerable fly to it for relief. It affords them indeed a temporary eaſe. But, alas! this ſolace is ſhort-lived, and when it is over, the ſpirits ſink as much below their natural pitch, as they had before been raiſed above it. Hence a repetition of the doſe becomes neceſſary, and every freſh doſe makes way for another, till the unhappy wretch becomes a ſlave to the bottle, and at length falls a ſacrifice to what nature intended only as a medicine. No man is ſo dejected as the drunkard when his debauch is gone off. Hence it is, that thoſe who have the greateſt flow of ſpirits while the glaſs circulates freely, are of all others the moſt melancholy when ſober, and often put an end to their own miſerable exiſtence in a fit of ſpleen or ill humour.

Drunkenneſs not only proves deſtructive to health, but likewiſe to the faculties of the mind. It is ſtrange that creatures who value themſelves on account of a ſuperior degree of reaſon to that of the brutes, ſhould take pleaſure in ſinking ſo far below them. Were ſuch as voluntarily deprive themſelves of the uſe of reaſon, to continue ever after in that condition, it would ſeem but a juſt puniſhment. Though that be not the conſequence of one act of drunkenneſs, it ſeldom fails to ſucceed a courſe of intoxication. By a habit of drinking, the greateſt genius is often reduced to a mere dunce *.

* In a ſubſequent edition, the Author obſerves, that intoxication is peculiarly hurtful to young perſons. It heats their blood, impairs their ſtrength, obſtructs their growth; beſides, the frequent uſe of ſtrong liquors, in the early part of life, deſtroys, in a great meaſure, the benefit that might be derived from a judicious uſe of them afterwards.

Drunkenneſs is not only a moſt abominable vice in itſelf, but ſerves as an inducement to many others. There is hardly any crime ſo horrid that the drunkard will not perpetrate for the love of liquor. We have

OF INACTIVITY.

MANY look upon the neceſſity which man is under of earning his bread by labour as a curſe. Be that as it may, it is evident from the ſtructure of the body, that exerciſe is not leſs neceſſary for the preſervation of health, than food. Thoſe whom poverty obliges to labour for daily bread, are not only the moſt healthy, but generally the moſt happy. Induſtry ſeldom fails to place ſuch above want, and activity ſerves them inſtead of phyſic. This is peculiarly the caſe with thoſe who live by the culture of the ground. The great increaſe of inhabitants in infant-colonies, and the common longevity of ſuch as follow agriculture every where, evidently prove it to be the moſt healthful as well as the moſt uſeful employment.

The love of activity ſhows itſelf very early in man. So ſtrong is this principle, that a healthy youth cannot be reſtrained from exerciſe, even by the fear of puniſhment. Our love of motion is ſurely a ſtrong proof of its utility. Nature implants no diſpoſition in vain. Some imagine, that the love of motion was implanted in man, becauſe without it he could not obtain the neceſſaries of life; but ſuppoſe the neceſſaries of life could be univerſally obtained without motion, it would nevertheleſs be indiſpenſable. It ſeems to be a catholic law throughout the whole animal creation, That no creature, without exerciſe, can enjoy health. Every creature, except man, takes as much exerciſe as is neceſſary. He alone, and ſuch animals as are under his direction, deviate from this original law, and they ſuffer accordingly.

Inactivity

have known mothers ſell their children's clothes, the food that they ſhould have eat, and afterwards even the infants themſelves, in order to purchaſe the accurſed draught.

Inactivity never fails to bring on univerſal relaxation of the ſolids, which occaſions innumerable diſeaſes. When the ſolids are relaxed, neither the digeſtion, nor any of the ſecretions, can be duly performed. In this caſe, the worſt conſequences muſt enſue. How can thoſe who loll all day in eaſy chairs, and ſleep all night on beds of down, fail to be relaxed? Nor do ſuch greatly mend the matter, who never ſtir abroad but in a coach, or ſedan, &c. Theſe elegant pieces of luxury are become ſo common, that the inhabitants of great towns ſeem to be in ſome danger of loſing the uſe of their limbs altogether. It is now below any one to walk who can afford to be carried. How ridiculous would it ſeem to a perſon unacquainted with modern luxury, to behold the young and healthy ſwinging along on the ſhoulders of their fellow-creatures! or to ſee a fat carcaſe overrun with diſeaſes occaſioned by inactivity, dragged through the ſtreets by half a dozen horſes!

Glandular obſtructions generally proceed from inactivity. Theſe are the moſt obſtinate of all maladies. So long as the liver, kidnies, and other glands, duly perform their functions, health is ſeldom impaired; but when they fail, nothing can preſerve it. Exerciſe is almoſt the only cure we know for glandular obſtructions; indeed it does not always ſucceed; but there is reaſon to belive that it would ſeldom fail to prevent theſe complaints. One thing is certain, that amongſt thoſe who take enough of exerciſe, glandular diſeaſes are very little known; whereas the indolent and inactive are ſeldom free from them.

Weak nerves are the conſtant companions of inactivity. Nothing but exerciſe and open air can brace and ſtrengthen the nerves, or prevent the endleſs train of diſeaſes which proceed from a relaxed ſtate of theſe organs. We ſeldom hear the

active or laborious complain of nervous diſeaſes; theſe are reſerved for the ſons of eaſe and affluence. Many have been completely cured of nervous diſorders, by being reduced from a ſtate of opulence to labour for their daily bread. This plainly points out the ſources from whence ſuch diſeaſes flow, and the means by which they may be prevented.

It is abſolutely impoſſible to enjoy health without a free perſpiration; but that neceſſary diſcharge never goes properly on where exerciſe is wanting. When the matter which ought to be thrown off by perſpiration is retained in the body, it cannot fail to vitiate the humours. Hence proceed the gout, fevers, rheumatiſm, &c. In a word, none of the vital or animal functions can be duly performed when exerciſe is neglected. It alone would prevent many diſeaſes which cannot be cured, and would remove others where medicine proves ineffectual.

A late author *, in his excellent Treatiſe on Health, ſays, that the weak and valetudinary ought to make exerciſe a part of their religion. We would recommend this, not only to the weak and valetudinary, but to all whoſe buſineſs does not oblige them to take ſufficient exerciſe, as ſedentary artificers, ſhop-keepers, ſtudious people, &c. Such ought to take exerciſe as regularly as they take food. This, were people careful to huſband their time well, might be done without any interruption to buſineſs or ſtudy.

No piece of indolence hurts the health more than the modern cuſtom of lolling a-bed too long in a morning. This is univerſally the caſe in great towns. The inhabitants of cities ſeldom do much buſineſs before breakfaſt; but that is the beſt time for exerciſe, while the ſtomach is empty, and the body

* Cheyne.

body refreſhed with ſleep. Riſing early would not only give thoſe who cannot leave their buſineſs through the day, an opportunity of taking exerciſe, but it would prevent the bad effects of loitering in bed too long. The morning-air braces and ſtrengthens the nerves, and in ſome meaſure anſwers the purpoſe of a cold bath. Let any one who has been accuſtomed to lie a-bed till eight or nine o'clock, riſe by ſix or ſeven, ſpend a couple of hours in walking, riding, or any active diverſion without doors, and he will find his ſpirits chearful and ſerene through the day, his appetite keen, and his body braced and ſtrengthened. Cuſtom ſoon renders early riſing agreeable, and nothing contributes more to the preſervation of health.

Exerciſe, if poſſible, ought always to be taken in the open air. When that cannot be done, various methods may be contrived for exerciſing the body within doors, as dancing, fencing, the dumb bell, playing at tennis, &c. It is not neceſſary to adhere ſtrictly to any particular kind of exerciſe. The beſt way is to take them by turns, and to uſe that longeſt which is moſt ſuitable to the ſtrength and conſtitution. Thoſe kinds of exerciſe which give action to moſt of the bodily organs, are always to be preferred, as riding, walking, running, digging, ſwimming, and ſuch like.

It is much to be regretted, that active and manly diverſions are now ſo little regarded. Diverſions make people take more exerciſe than they otherwiſe would do, and are of the greateſt ſervice to ſuch as are not under the neceſſity of labouring for their bread. As active diverſions loſe ground, thoſe of a ſedentary kind ſeem to prevail. Sedentary diverſions are of no other uſe than to conſume the time which might be employed in exerciſe: Inſtead of relieving the mind, they often require more thought than either ſtudy or buſineſs. Every

thing that induces people to ſit ſtill, unleſs it be ſome neceſſary employment, ought to be avoided.

The diverſions which afford the beſt exerciſe are, hunting, ſhooting, playing at cricket, hand-ball, golff*, &c. Theſe exerciſe the limbs, promote perſpiration, and the other ſecretions. They likewiſe ſtrengthen the lungs, and give firmneſs and agility to the whole body.

Such as can, ought to ſpend two or three hours a-day on horſeback; thoſe who cannot, ſhould employ the ſame time in walking. The beſt time for taking exerciſe is in the morning, or at leaſt before dinner; but it ſhould never be continued too long. Over fatigue prevents the benefit of exerciſe, and weakens inſtead of ſtrengthening the body.

Every man ſhould lay himſelf under ſome ſort of neceſſity to take exerciſe. Indolence, like all other vices, when indulged, gains ground, and at length becomes agreeable. Hence many who were fond of exerciſe in the early part of life, become quite averſe from it afterwards. This is the caſe of moſt hypochondriac and gouty people, which renders their diſeaſes in a great meaſure incurable.

In ſome countries laws have been made, obliging every man, of whatever rank, to learn ſome mechanical employment. Whether ſuch laws were deſigned for the preſervation of health, or encouragement of manufacture, is a queſtion of no importance. Certain it is, that if gentlemen were frequently to amuſe and exerciſe themſelves in this way, it might have many good effects. They would at leaſt derive as much honour from a few maſterly

* Golff is a diverſion very common in North Britain. It is well calculated for exerciſing the body, and may always be taken in ſuch moderation, as neither to over-heat nor fatigue. It has greatly the preference over cricket, tennis, or any of thoſe games which cannot be played without violence.

maſterly ſpecimens of their own workmanſhip, as from the character of having ruined moſt of their companions by gaming or hard drinking. Beſides, men of leiſure, by applying themſelves to the mechanical arts, might improve them, to the great benefit of ſociety. This would afford a more comfortable reflection at the cloſe of life, than the conſciouſneſs of having lived in the world for no other purpoſe than to eat and drink.

Indolence not only occaſions diſeaſes, and renders men uſeleſs to ſociety, but promotes all manner of vice. To ſay a man is idle, is perhaps, in the ſtrongeſt terms, to call him vicious. The mind, if not engaged in ſome uſeful purſuit, is conſtantly in queſt of ideal pleaſures, or impreſſed with the apprehenſion of ſome imaginary evil. From theſe ſources proceed moſt of the miſeries of mankind. Surely man never was intended to be idle. Inactivity fruſtrates the very deſign of his creation. An active life is the beſt guardian of virtue, and the greateſt preſervative of health.

OF INFECTION.

A NUMBER of diſeaſes are infectious. Every perſon ought therefore, as far as he can, to avoid all communication with the diſeaſed. The common practice of viſiting the ſick, though well meant, has many ill conſequences. Far be it from us to diſcourage any act of charity or benevolence, eſpecially towards thoſe in diſtreſs; but we cannot help blaming ſuch as endanger their own or neighbours lives by a miſtaken friendſhip, or an impertinent curioſity.

The houſes of the ſick, eſpecially in the country, are generally crowded from morning till night with idle viſitors. It is cuſtomary, in ſuch places, for ſervants and young people to wait upon the ſick by turns. It would be a miracle indeed ſhould ſuch always eſcape. Experience teaches us the danger of this conduct. People often catch fevers in this way, and communicate them to others, till at length they become epidemic.

It would be thought highly improper for one who had not had the ſmall-pox, to wait upon a patient in that diſeaſe; yet many other fevers are almoſt as infectious as the ſmall-pox, and not leſs fatal. Some imagine, that fevers prove more fatal in villages than in great towns, for want of proper medical aſſiſtance. How far that is true, we will not pretend to ſay; but we are inclined to think, that it rather proceeds from the cauſe above mentioned.

Were a plan to be laid down for communicating infection, it could not be done more effectually than by the common method of viſiting the ſick. Such viſitors not only endanger themſelves and their connections, but likewiſe hurt the ſick. By crowding the houſe, they render the air unwholeſome, and by their private whiſpers and diſmal countenances, diſturb the imagination of the ſick, and depreſs their ſpirits. Sick perſons, eſpecially in fevers, ought to be kept as quiet as poſſible. The ſight of ſtrange faces, and every thing that diſturbs the mind, hurts them.

The common practice in country-places, of inviting great numbers of people to funerals, and crowding them into the ſame apartment where the corpſe lies, is another way of ſpreading infection. The infection by no means dies with the patient. In many caſes it rather grows ſtronger as the body becomes putrid. This is peculiarly the caſe of

thoſe

thoſe who die of malignant fevers, or other putrid diſeaſes. Such ought not to lie long unburied; and people ſhould keep at a diſtance from them. It is very common for people, after attending the funeral of a friend, to be ſeized with the ſame diſeaſe of which he died, and to ſhare the ſame fate.

It would tend greatly to prevent the ſpreading of infectious diſeaſes, if thoſe in health were kept at a proper diſtance from the ſick. The Jewiſh Legiſlator, among many other wiſe inſtitutions for preſerving health, has been peculiarly attentive to the means of preventing infection, or *defilement* as it is called, either from a diſeaſed perſon or a dead body. In many caſes, the diſeaſed were to be ſeparated from thoſe in health; and it was deemed a crime even to approach their habitations. If a perſon only touched a dead body, he was appointed to waſh himſelf in water, and to keep for ſome time at a diſtance from ſociety.

Infectious diſeaſes are often communicated by clothes. It is extremely dangerous to wear apparel which has been worn by a perſon who died of an infectious diſeaſe, as infection will lodge in it a long while, and afterwards produce very tragical effects. This ſhows the danger of buying at random the clothes which have been uſed by other people.

Infectious diſorders are frequently imported. Commerce, together with the riches of foreign climes, brings us alſo their diſeaſes. Theſe do often more than counterbalance all the advantages of that trade by means of which they are introduced. It is to be regretted, that ſo little care is commonly taken, to prevent either the introduction or ſpreading of infectious diſeaſes. Some attention indeed is generally paid to the plague; but other diſeaſes paſs unregarded.

Infection is often ſpread by jails, hoſpitals, &c. Theſe

Theſe are frequently ſituated in the very middle of cities, or populous towns; and when infectious diſeaſes break out in them, it is impoſſible for the inhabitants to eſcape. Were magiſtrates to pay any regard to the health of the people, this evil might be eaſily remedied.

Many are the cauſes which tend to diffuſe infection through populous cities. The whole atmoſphere of a large town is one contaminated maſs, abounding with every kind of infection, and muſt be pernicious to health. The beſt advice that we can give to ſuch as live in cities, is to chuſe an open ſituation; to avoid narrow, dirty, crowded ſtreets; to keep their own houſes and offices clean; to admit the freſh air every day into their apartments; and to be as much abroad as their time will permit.

It would tend greatly to prevent the ſpreading of infectious diſeaſes, were proper nurſes every where employed to take care of the ſick. This might often ſave a family, or even a whole town, from being infected by one perſon. We do not mean that people ſhould abandon their friends or relations in diſtreſs, but only to put them on their guard againſt being too much in company with thoſe who are afflicted with diſeaſes of an infectious nature.

Such as wait upon the ſick in infectious diſeaſes, ought to ſtuff their noſes with tobacco, or ſome other ſtrong ſmelling herb, as rue, tanſy, or the like. They ought likewiſe frequently to ſprinkle the room where the patient lies with vinegar, or other ſtrong acids; and to avoid the patient's breath as much as they can.

However eaſy theſe hints may ſeem, yet a proper attention to them would ſave many lives. A fever, or other infectious diſeaſe, ſeldom breaks out in a family, but it affects the moſt of them, and frequently

quently ſeizes every individual. The ſcenes of calamity and diſtreſs produced by this means, are too often witneſſed by thoſe who attend the ſick.

Young people are peculiarly liable to catch infection; and therefore ought to be kept at the greateſt diſtance from the diſeaſed. Their minds are eaſily affected with ſcenes of diſtreſs, and they often catch diſeaſes even by the force of imagination.

We would not only recommend it to magiſtrates, to take proper meaſures to prevent the ſpreading of infectious diſeaſes, but alſo to maſters of families. A ſingle ſervant may ſpread a diſeaſe amongſt a whole family, which may prove fatal to many of them. For this reaſon, when a ſervant is ſeized with a fever, or other infectious diſeaſe, he ought to be kept in ſome ſeparate apartment, or rather ſent to an hoſpital or infirmary. Servants would not only be taken better care of in this way, but fatal diſeaſes might be often prevented.

Infection is often caught by ſleeping with the diſeaſed. Every perſon knows that this is the caſe in conſumptions of the lungs; but other diſeaſes are infectious as well as conſumptions: Nay, we hardly know any diſeaſe that is not ſo in ſome degree. If a ſound perſon communicates health, ſurely a diſeaſed one muſt have the contrary effect. Were this attended to in the choice of companions for life, it would ſave many from a premature end.

Not only the diſeaſes of the body, but alſo thoſe of the mind, are infectious. For this reaſon, our companions ought to be of a ſound mind, as well as a ſound body. A melancholy perſon, for example, diffuſes a gloom all around him, and generally taints the minds of his companions with the temper of his own. Thoſe who would be healthy and

happy,

happy, ought therefore to aſſociate with the young, the chearful, and good humoured.

OF THE PASSIONS.

The paſſions have great influence both in the cauſe and cure of diſeaſes. How mind acts upon matter will, in all probabili y, ever remain a ſecret. It is ſufficient for us to know, that there is eſtabliſhed a reciprocal influence betwixt the mental and corporeal parts; and that whatever diſorders the one, likewiſe hurts the other.

OF ANGER.

The paſſion of *anger* ruffles the mind, diſtorts the countenance, hurries on the circulation of the blood, and diſorders the whole vital and animal functions. It often occaſions fevers, with other acute diſeaſes; and ſometimes brings on ſudden death. This paſſion is peculiarly hurtful to the delicate, and thoſe of weak nerves. I have known a hyſteric woman loſe her life by a violent fit of anger; all ſuch ought to guard againſt the exceſs of this paſſion, with the utmoſt care.

It is not always in our power to prevent being angry; but we may ſurely avoid harbouring reſentment in our breaſt. Reſentment preys upon the mind; it occaſions the moſt obſtinate chronical diſorders, and gradually waſtes the conſtitution. Nothing ſhows true greatneſs of mind more than to forgive injuries: It promotes the peace of ſociety, and greatly conduces to our own eaſe, health, and felicity.

Such

Such as value health ſhould avoid violent guſts of anger, as they would the moſt deadly infection. They ought never to indulge reſentment, but to endeavour at all times to keep their minds calm and ſerene. Nothing tends ſo much to the health of the body, as a conſtant tranquillity of mind.

OF FEAR.

The influence of *fear*, both in occaſioning and aggravating diſeaſes, is very great. No man ought to be blamed for a decent concern about life; but too great a deſire to preſerve it, is often the way to loſe it. Fear and anxiety, by depreſſing the ſpirits, pre-diſpoſe us to diſeaſes, and often render thoſe fatal which an undaunted mind would overcome.

Sudden fear has generally violent effects. Epilectic fits, and other convulſive diſorders, are often occaſioned by it. Hence the danger of that practice, ſo common among young people, of frightening one another. By this many have loſt their lives; and others have been rendered uſeleſs ever after. It is dangerous to tamper with the human paſſions. The mind may eaſily be thrown into ſuch diſorder, as never again to act with regularity.

But the gradual effects of fear prove more generally hurtful. The conſtant dread of ſome future evil, by dwelling upon the mind, often occaſions the very evil itſelf. Hence it comes to paſs, that ſo many die of thoſe diſeaſes of which they long had a dread, or which ſome accident, or fooliſh prediction, had impreſſed on their minds. This often happens to women in child-bed. Many of thoſe who die in that ſituation, are impreſſed with the notion of their death, a long while before

it

it happens; and there is reaſon to believe, that ſuch impreſſions are often the cauſe of it.

The methods taken to impreſs the minds of women with apprehenſions of the great danger and peril of child-birth, are very hurtful. Few women die in labour, though many loſe their lives after it; which may be thus accounted for: A woman after delivery, finding herſelf weak and exhauſted, immediately apprehends ſhe is in danger: But fear ſeldom fails to obſtruct the neceſſary evacuations upon which her recovery depends. Thus the ſex often fall a ſacrifice to their own imaginations, when there would be no danger, did they apprehend none.

It ſeldom happens, that two or three women who are generally known die in child-bed, but their death is followed by many others. Every woman of their acquaintance, who is with child, dreads the ſame fate, and the diſeaſe becomes epidemical, by the mere force of imagination. This ſhould induce pregnant women to deſpiſe fear, and by all means to avoid thoſe tattling goſſips who are continually telling them the misfortunes of others. Every thing that may in the leaſt alarm a pregnant, or child-bed woman, ought, with the greateſt care, to be guarded againſt. Many women have loſt their lives in child-bed, by the old ſuperſtitious cuſtom, ſtill kept up in moſt parts of Britain, of tolling the pariſh-bell for every perſon who dies. People who think themſelves in danger, are very inquiſitive; and if they come to know that the bell tolls for one who died in the ſame ſituation, what muſt be the conſequence?

But this cuſtom is not pernicious to child-bed women only. It is hurtful in many other caſes. When low fevers, in which it is difficult to ſupport the patient's ſpirits, prevail, what muſt be the

the effect of a funeral-peal ſounding five or ſix times a-day in his ears? His imagination will no doubt ſuggeſt, that others died of the ſame diſeaſe which he labours under. Nor will the matter be at all mended, by endeavouring to perſuade him of the contrary. This will tend rather to confirm than remove his ſuſpicions.

If this childiſh cuſtom cannot be aboliſhed, we ought to keep the ſick as much from hearing it as poſſible, and from every thing elſe that may tend to alarm them. So far is this from being attended to, that many make it their buſineſs to viſit the ſick, on purpoſe to whiſper diſmal ſtories in their ears. Such may paſs for ſympathiſing friends, but they ought rather to be reckoned enemies, and ranked amongſt murderers. All who wiſh well to the ſick, ought to keep ſuch perſons at the greateſt diſtance from them.

A cuſtom has long prevailed among phyſicians, of prognoſticating, as they call it, the patient's fate, or foretelling the iſſue of the diſeaſe. Vanity, no doubt, introduced this practice, and ſtill ſupports it, in ſpite of common ſenſe, and the ſafety of mankind. I have known a phyſician barbarous enough to boaſt, that he pronounced more *ſentences* than all his Majeſty's judges. Would to God that ſuch ſentences were not often equally fatal! It may be alleged, that the doctor does not declare his opinion before the patient. So much the worſe. A ſenſible patient had better hear what the doctor ſays, than learn it from the diſconſolate looks, the watery eyes, and the broken whiſpers of thoſe about him. It ſeldom happens, when the doctor gives an unfavourable opinion, that it can be concealed from the patient. The very embarraſſment which generally appears in diſguiſing what he has ſaid, is ſufficient to diſcover the truth.

We

We do not ſee what right any man has to announce the death of another, eſpecially if ſuch a declaration has a chance to kill him. Mankind are indeed very fond of prying into future events, and ſeldom fail to importune the phyſician for his opinion. A doubtful anſwer, however, or one that may tend to encourage the hopes of the patient, is ſurely the moſt ſafe. This conduct could neither hurt the patient nor the phyſician. Nothing tends more to deſtroy the credit of phyſic, than thoſe bold prognoſticators, who, by the bye, are generally the moſt ignorant. The miſtakes which daily happen in this way are ſo many ſtanding proofs of human vanity, and the weakneſs of ſcience *.

The vanity of foretelling the fate of the ſick, is not peculiar to the Faculty. Others follow their example, and thoſe who think themſelves wiſer than their neighbours often do much miſchief in this way. Humanity ſurely calls upon every one to comfort the ſick, and not to add to their affliction by alarming their fears. A phyſician may often do more good by a mild and ſympathiſing behaviour, than by medicine, and ſhould never neglect to adminiſter that greateſt of all cordials, Hope.

OF GRIEF.

Grief is the moſt deſtructive of all the paſſions. Its effects are permanent; and when it ſinks deep into the mind, it generally proves fatal. Anger and fear, being of a more violent nature, ſeldom laſt long; but grief often changes into a fixed melancholy, which preys upon the ſpirits, and waſtes the conſtitution. We ſhould beware of indulging this

* Caſes, however, no doubt, do frequently occur, in which it is highly proper for the phyſician to inform ſome of the neareſt relations of the real ſituation of the patient.

this paſſion. It may generally be conquered at the beginning; but when it has gained ſtrength, all our attempts become vain.

No perſon can prevent misfortunes; but it ſhows true greatneſs of mind to bear them with ſerenity. Many make a merit of indulging grief, and when misfortunes happen, they obſtinately refuſe all conſolation, till the mind, overwhelmed with melancholy, ſinks under the load. Such conduct is not only deſtructive to health, but inconſiſtent with reaſon, religion, and common ſenſe.

Change of ideas is as neceſſary for health as change of poſture. When the mind dwells long upon one object, eſpecially of a diſagreeable nature, it hurts the whole functions of the body. Thus grief indulged ſpoils the digeſtion, and deſtroys the appetite. By that means the ſpirits are depreſſed, the nerves relaxed, the bowels inflated with wind, and the humours, for want of freſh ſupplies of chyle, vitiated. Thus many an excellent conſtitution has been ruined by a family-misfortune, or any thing that occaſioned exceſſive grief.

It is utterly impoſſible, that any perſon of a dejected mind ſhould enjoy health. Life may indeed be dragged on for a few years: But whoever would live to a good old age, muſt be good-humoured and chearful. This indeed is not altogether in our own power; yet our temper of mind, as well as actions, depend greatly upon ourſelves. We can either think of agreeable or diſagreeable objects, as we chuſe; we can go into chearful or melancholy company; we can mingle in the amuſements and offices of life, or ſit ſtill and brood over our calamities. Theſe, and many ſuch things, are certainly in our power, and from theſe the mind generally takes its caſt.

The variety of ſcenes which preſent themſelves

to the ſenſes, were certainly deſigned to prevent our attention from being too long fixed upon any one object. Nature abounds with variety, and the mind, unleſs fixed down by habit, delights in contemplating new objects. This at once points out the method of relieving the mind in diſtreſs. Turn the attention to other objects. Examine them with accuracy. When the mind begins to recoil, ſhift the ſcene. By this means a conſtant ſucceſſion of new ideas may be kept up, till the diſagreable ones entirely diſappear. Thus travelling, the ſtudy of any art or ſcience, reading or writing on ſuch ſubjects as engage the attention, will ſooner expel grief than the moſt ſprightly amuſements.

It has already been obſerved, that exerciſe is abſolutely neceſſary for the health of the body; but it is no leſs ſo for that of the mind. Indolence nouriſhes grief. When the mind has nothing elſe to think of but calamities, no wonder that it dwells there. Few people who purſue buſineſs with attention are hurt by grief. Inſtead of abſtracting ourſelves from the world or buſineſs, when misfortunes happen, we ought to engage in it with more than uſual attention, to diſcharge with double diligence the functions of our ſtation, and to mix with friends of an eaſy ſocial temper.

Innocent amuſements are by no means to be neglected. Theſe, by leading the mind inſenſibly to the contemplation of agreeable objects, help to diſpel the gloom which misfortunes caſt over it. They make time ſeem leſs tedious, and have many other happy effects.

Some, when overwhelmed with grief, betake themſelves to drinking. This is making the cure worſe than the diſeaſe. It ſeldom fails to end in the ruin of fortune, character, and conſtitution.

The beſt way to counteract the violence of any paſſion is to encourage its oppoſite. Thus, under the

the moſt preſſing calamities, HOPE is always to be kept in view. Hope is the very ſupport of life, and abſolutely neceſſary to the happineſs of a rational being.

Should all other means of comfort fail, the Chriſtian religion affords an inexhauſtible ſource of conſolation. It teaches us, that the ſufferings of this life are deſigned to prepare us for a future ſtate of happineſs; and that all who purſue the paths of virtue ſhall at laſt arrive at complete felicity.

CHAP. III.

OF ARTIFICERS, THE LABORIOUS, THE SEDENTARY, THE STUDIOUS.

THAT men are expoſed to particular diſeaſes from the occupations which they follow, is a fact well known; but to remedy that evil is a difficult matter. People are under a neceſſity of purſuing the employments in which they are bred, whether they be favourable to health or not. Hence all that we can propoſe under this article, is to point out thoſe diſeaſes to which men are more immediately expoſed from their particular occupations; and to ſhew how far ſuch diſeaſes, by due care, may be avoided.

The firſt cauſe of the diſeaſes of artificers that we ſhall mention, is the unwholeſome ſmells and noxious exhalations which often proceed from thoſe materials in which they are employed. Thus tallow-chandlers, boilers of oil, dreſſers of leather, and all who work upon putrid animal ſubſtances, are afflicted with diſeaſes of the ſtomach and lungs. Ill ſmells not only create a nauſea, and hurt the digeſtion, but even taint the humours themſelves, and frequently prove the cauſe of fevers, conſumptions, &c.

Theſe occupations are not only hurtful to ſuch as are employed in them, but likewiſe to thoſe who live in the neighbourhood of the places where they are carried on; for which reaſon they ought always to be at a proper diſtance from any town.

The beſt advice that we can give to ſuch as are employed

employed in this way, is, to pay the utmoſt attention to cleanlineſs. They are indeed obliged to wear dirty clothes while at work; but the moment they leave off, they ought to waſh themſelves, ſtrip off their dirty clothes, put on clean ones, and remove to a proper diſtance from the ſmell of their work-ſhops, &c. No one who has not made the trial, can imagine how far an attention to theſe, and other pieces of cleanlineſs, will go in preſerving the health of thoſe artificers who are obliged to follow ſuch employments.

Chymiſts, founders, glaſs-makers, &c. beſides the noxious exhalations from thoſe bodies in which they work, are forced to breathe an air that is in a manner burnt, or at leaſt too much rarified to expand the lungs, or anſwer the important purpoſes of reſpiration *. Such people are generally thin, pale, and of a weak conſumptive habit. They are melted down with ſweat, in order to ſupply which evacuation large quantities of liquor become neceſſary. Thus, by hard working and faſt living, their conſtitutions are worn out in a few years.

Such artiſts ought to work by turns, and ſhould never continue long near the furnace at a time. They ſhould be careful, when they leave off work, to cool gradually, avoiding every thing that may ſuddenly check the perſpiration. The places where theſe occupations are carried on ſhould be properly conſtructed for diſcharging the ſmoke, and other exhalations, and admitting a free current of freſh air; otherwiſe the people who work in them can never enjoy health.

The exhalation from metals and minerals is not only hurtful to founders, chymiſts, and others who manufacture them for particular purpoſes, but likewiſe to miners, or thoſe who dig them out of the

* See a former note on this ſubject, p. 67.

earth. Fallopius obſerves, that ſuch as work in mines of mercury ſeldom live above three or four years. They are generally affected with palſies, vertigos, and other diſeaſes of the nerves, which ſoon put an end to their miſerable lives. Thoſe alſo who work in lead-mines are very liable to paralytic diſorders, with gripes, cholics, and other complaints of the bowels.

Miners ſuffer from their ſituation as well as from the metals in which they work. The air in mines being totally excluded from the ſun's rays, by ſtagnation loſes its ſpring, and often becomes damp. This kind of air is to be avoided as the moſt deadly poiſon: Beſides, mines are often wet, which renders them ſtill more hurtful. This is one reaſon why miners are very ſubject to aches, cramps, rheumatic pains, &c.

Miners ſhould never continue too long under ground at a time; neither ought they at any time to go to work faſting, nor to ſuffer their ſtomachs to be empty while they continue in the mines. They ought not to live too low; and their liquor ſhould be generous. They ſhould by all means avoid coſtiveneſs, by either taking food of an opening nature, or, when that does not ſucceed, a gentle purge. Oils are found to be a good preſervative againſt gripes from the effluvia of metals. Oils both open the belly, and ſheath the coats of the inteſtines, which prevents their being hurt by the poiſonous particles of the metal.

Miners ſhould by all means take care that the air have a free current through the mines, and that neither it nor the water be ſuffered to ſtagnate. All who work in mines or metals ought to waſh when they leave off work, and to change their clothes. Thoſe parts of the metal which adhere either to the ſkin or the clothes, being continually abſorbed into the body, muſt neceſſarily do hurt.

People

People are too apt to look upon ſuch circumſtances as unworthy of their attention; but theſe ſmall cauſes, by being neglected, never fail to produce the moſt dreadful effects.

Plumbers, painters, gilders, and all who work in metals, are ſubject to the ſame diſeaſes as thoſe who dig them. They are afflicted with cholics, aſthmas, palſies, &c. and ſhould obſerve the ſame precautions as miners. It is impoſſible for people thus employed, at all times to avoid ſome degree of danger; but it conſiſts with obſervation, that, by due care, they may prolong their lives to a good old age, with a tolerable ſhare of health. We have ſeldom ſeen a perſon in danger from any of the above cauſes, but it proceeded from his own foolhardineſs, or want of care.

As it would greatly exceed our bounds to ſpecify the diſorders peculiar to every occupation, we ſhall therefore conſider mankind under the following general claſſes, *viz. Laborious*, *Sedentary*, and *Studious*.

THE LABORIOUS.

Though thoſe who follow laborious employments are in general the moſt healthy, yet the nature of their occupations, and the places where they are carried on, expoſe them to many diſeaſes. Huſbandmen, for example, are expoſed to all the viciſſitudes of the weather, which are often very great and ſudden. They are likewiſe forced to work hard, and often to carry loads above their ſtrength, which, by overſtraining the veſſels, occaſion many diſeaſes, as aſthmas, ruptures, &c.

Intermittent fevers, or agues, are very common amongſt thoſe who labour without doors. Theſe are occaſioned by the frequent viciſſitudes of heat and cold to which they are expoſed, by the bad water which they are often obliged to drink, by the low marſhy ſituation of their houſes, and by their frequent expoſure to the evening-dews, night-air, &c.

Aſthmas and inflammations of the breaſt are very incident to the laborious. Theſe are occaſioned by the violent exerciſe and the frequent extremes of heat and cold to which they are expoſed. Thoſe who bear heavy burdens, as porters, &c. are obliged to draw in the air with much greater force, and alſo to keep their lungs diſtended with more violence than is neceſſary for common reſpiration: By this means the tender veſſels of the lungs are over-diſtended, and often burſt, inſomuch that a ſpitting of blood or fever enſues. Hippocrates mentions an inſtance to this purpoſe, of a man who, upon a wager, had carried an aſs. The man, he ſays, was immediately ſeized with a fever, a vomiting of blood, and a rupture.

Carrying heavy burdens is often the effect of mere indolence, which prompts people to do at once what ſhould be done at twice. It likewiſe proceeds frequently from bravado, or an emulation to outdo others. Hence it is that the ſtrongeſt men are moſt generally hurt by heavy burdens, hard labour, or feats of activity. It is rare to find one who excels in this way, without a hernia, a hæmoptoe, or ſome other diſeaſe, which he enjoys as the fruit of his folly. One would imagine, that the daily inſtances which we have of the fatal effects of carrying great weights, running, wreſtling, &c. ſhould be ſufficient to put a ſtop to ſuch practices.

There are indeed ſome employments which neceſſarily

ceſſarily require a violent exertion of ſtrength, ſuch as blackſmiths, carpenters, &c. None ought to follow theſe occupations but men of a ſtrong body; and they ſhould never exert their ſtrength to the utmoſt, nor work too long. When the muſcles are violently ſtrained, frequent reſt is neceſſary, in order that they may recover their tone; where this is neglected, the ſtrength and conſtitution will ſoon be worn out, and a premature old age brought on.

The quinſy and eriſipelas, or St Anthony's fire, are likewiſe diſeaſes very incident to the laborious. Theſe are occaſioned by whatever gives a ſudden check to the perſpiration, as drinking cold liquor when the body is warm, keeping on wet clothes, ſitting or lying on the cold ground, damp houſes, wet feet, &c. As the great danger of theſe practices has already been pointed out, it is unneceſſary to inſiſt upon them here.

The laborious are often afflicted with the iliac paſſion, the cholic, and other complaints of the bowels. Theſe are often occaſioned by wet feet, or wet clothes; but they more generally proceed from flatulent and indigeſtable food. Labourers eat unfermented bread made of peaſe, beans, rye, and other windy ingredients. They alſo eat great quantities of unripe fruits, baked, ſtewed, or raw, with various kinds of roots and herbs, upon which they drink ſour milk, ſtale ſmall beer, &c. Such a compoſition cannot fail to fill the bowels with wind, and occaſion diſeaſes. Accordingly we find theſe people in the decline of life univerſally complaining of flatulencies; a diſorder which renders many of them very unhappy, and for which no cure is yet known. The beſt advice that we can give them is to avoid windy food as far as poſſible

Inflammations, whitloes, and other diſeaſes of the

the extremities, are very common amongſt thoſe who labour without doors. Theſe diſeaſes are often attributed to venom, or ſome kind of poiſon; but they generally proceed either from ſudden heat after cold, or the contrary. When ſuch people come from the fields cold and wet, they run to the fire, and often plunge their hands in warm water, by which means the blood and other humours in theſe parts are ſuddenly expanded, and the veſſels not yielding ſo quickly, a ſtrangulation happens, and an inflammation or mortification enſues.

When labourers come home cold, they ought to keep at a diſtance from the fire for ſome time, to waſh their hands in cold water, and to rub them well with a dry cloth. It ſometimes happens that people are ſo benumbed with cold, as to loſe, for a time, the uſe of their limbs altogether. In ſuch a caſe, the only remedy is to rub the parts affected with ſnow, or, failing that, with cold water. If they be held near the fire, or plunged into warm water, a mortification will frequently enſue.

Labourers in the hot ſeaſon are apt to lie down and ſleep in the ſun. This practice is ſo dangerous, that they often riſe in a high fever. The burning fevers, which prove ſo fatal about the end of ſummer, and beginning of autumn, are often occaſioned by this means. When labourers leave off work, which they ought always to do during the heat of the day, they ſhould go home, or, at leaſt, get under ſome cover, where they may repoſe themſelves in ſafety.

The different ſeaſons of the year expoſe thoſe who labour without doors to different diſeaſes. Thus, in the ſpring, agues are frequent; in ſummer, as has been obſerved, burning fevers abound; and in autumn, dyſenteries and fluxes prevail. The latter proceed not only from the perſpiration being at that time obſtructed, but alſo from the green

traſh,

trash, or unripe fruits, which country-people eat in great quantities. Indeed, if fruit be ripe, and eat in moderation, it rather prevents than occasions dysenteries; but it is equally certain, that much bad fruit will bring on a flux.

Labourers are often hurt by long fasting. They frequently follow their employments in the fields from morning till night, without eating any thing. This cannot fail to hurt their health. However homely their fare may be, they ought to have it at regular times; and the harder they work, the more frequently should they eat.

Labourers likewise suffer from the nature of their food. They are extremely careless with respect to what they eat or drink, and often, through mere indolence, eat unwholesome food, when they might, for the same expence, have that which is wholesome. The poor often hurt their health for want of a proper method of living, and in the end save nothing by it. In many parts of Britain, the peasants are too careless to take the trouble of dressing their victuals, though they have fuel for nothing. Such people will live upon one meal a-day in indolence, rather than labour, though it were to procure them the greatest affluence.

Poverty is doubtless a very general cause of diseases among the labouring part of mankind. Few of them have much foresight; and if they had, it seldom is in their power to lay any thing up against hard times. They are glad to make a shift to live from day to day; and when any disease renders them unfit for work, their families are ready to starve. Here the God-like virtue of charity ought ever to exert herself. To relieve the industrious poor, when in distress, is surely the most exalted act of religion, and can never lose its reward. They alone who witness those scenes of calamity, can form a notion of what numbers perish in diseases for

for want of proper aſſiſtance, and even for want of the neceſſaries of life. It were to be wiſhed, for the honour of human nature, as well as for the good of ſociety, that theſe things were more looked into.

Fevers of a very bad kind are often occaſioned by what is called *poor living*. When the body is not ſufficiently nouriſhed, the humours become bad, and the ſpirits ſink; from whence the moſt fatal conſequences muſt ever enſue. *Poor living* is likewiſe productive of cutaneous diſeaſes. It is remarkable, that cattle, when pinched in their food, are generally affected with diſeaſes of the ſkin. Theſe diſeaſes ſeldom fail to diſappear when they are put upon a good paſture; which ſhews how much a good ſtate of the humours depends upon a ſufficient quantity of proper nouriſhment.

Labourers often ſuffer from a fooliſh emulation, which prompts them to vie with one another, till they drop down dead, or over-heat themſelves to ſuch a degree as to occaſion a fever. As this is the effect of vanity, it ought always to be checked by thoſe who have the ſuperintendence of them. Such as wantonly throw away their lives in this manner, deſerve to be looked upon in no better light than ſelf-murderers. It is a pity that poor widows and fatherleſs children ſhould ſuffer by ſuch childiſh conduct: Could we ſpeak to the paſſions of men, we would bid them think of theſe, and then conſider of how great importance their lives are.

The office of a ſoldier in time of war, may be ranked amongſt laborious employments. Soldiers ſuffer many hardſhips from the inclemency of ſeaſons, long marches, hunger, bad proviſions, &c. Theſe occaſion fevers, fluxes, rheumatiſms, and other fatal diſeaſes, which often do more execution than the ſword, eſpecially when campaigns are

continued

continued too late in the ſeaſon. One week of cold rainy weather will kill more men than many months when it is dry and warm.

Every commander ſhould take care that his ſoldiers be well clothed and well fed. He ought alſo to endeavour to put an end to the campaign in due ſeaſon, and to provide his men with winter-quarters that are dry and well-aired. Theſe eaſy rules, with taking care to keep the ſick at a proper diſtance from thoſe in health, will go a great length in preſerving the lives of the ſoldiery.

It is indeed to be regretted, that ſoldiers ſuffer no leſs by indolence and intemperance in time of peace, than from hardſhips in time of war. When men are idle, they will be vicious. It would therefore be of the greateſt importance, could a ſcheme be formed for rendering the military in time of peace leſs vicious, more healthy, and more uſeful to ſociety. All theſe deſirable objects might certainly be promoted by only employing them five or ſix hours every day, and advancing their pay in proportion. By this means idleneſs, the mother of vice, would not only be prevented, but the price of labour might be lowered. Public works, as harbours, canals, turnpike-roads, &c. might be made, without hurting manufactures; and ſoldiers might be enabled to marry, and bring up children.

A ſcheme of this kind might be ſo conducted as to raiſe inſtead of depreſſing the martial ſpirit, provided the men were never allowed to work above a certain number of hours, and obliged always to work without doors. No ſoldier ſhould ever be allowed to work too long, nor permitted to follow any ſedentary employment. Sedentary employments render men weak and effeminate, and quite unfit for the hardſhips of war; whereas working a few hours daily without doors would inure them to the

the weather, brace their nerves, and promote their ſtrength and courage.

Sailors may alſo be numbered amongſt the laborious. They undergo great hardſhips from change of climate, the violence of weather, hard labour, bad proviſions, &c. Sailors are of ſo great importance both to the trade and ſafety of this kingdom, that too much pains can never be beſtowed in pointing out the proper means of preſerving their lives.

Exceſs is one great ſource of the diſeaſes of ſea-faring people. When they get on ſhore, after being long at ſea, without regard to the climate, or their own conſtitutions, they plunge headlong into all manner of riot, and often perſiſt till a fever puts an end to their lives. Thus intemperance, and not the climate, is often the cauſe why ſo many of our brave ſailors die on foreign coaſts. We would not have ſea-faring people live too low; but they will find temperance the beſt defence againſt fevers, and many other maladies.

Sailors, when on duty, are often expoſed to cold and wet. When that happens, they ſhould change their clothes as ſoon as they are relieved, and take every proper method to reſtore the perſpiration. In this caſe they ſhould not have recourſe to ſpirits, or other ſtrong liquors, but ſhould rather drink ſuch as are weak and diluting, of a proper warmth, and go immediately to bed, where a ſound ſleep and a gentle ſweat will ſet all to rights.

The health of ſailors, however, ſuffers moſt from unwholeſome food. The conſtant uſe of ſalted proviſions vitiates the whole humours, and occaſions the ſcurvy, and other obſtinate maladies. It is no eaſy matter to prevent this diſeaſe in long voyages; yet we cannot help thinking, that much might be done towards effecting ſo deſirable an end, were due pains beſtowed for that purpoſe. For example,

various

various roots, greens, and fruits, might be kept a long time at ſea, as onions, potatoes, cabbages, lemons, oranges, tamarinds, apples, &c. When fruits cannot be kept, the juices of them, either freſh or fermented, may. With theſe all the drink, and even the food of the ſhip's company, ought to be acidulated in long voyages. But ſuppoſe the vegetable acids ſhould fail, yet the chymical, as cream of tartar, elixir of vitriol, &c. may be kept for any length of time; and as they are attended with no expence, it is in the power of every ſailor to lay in enough of theſe for the longeſt voyage. Theſe, though not ſo good as the vegetable acids, are ſtill better than none, and ſhould always be uſed when the others fail.

Stale bread and beer likewiſe contribute to vitiate the humours. Meal will keep for a long while on board, of which freſh bread might frequently be made. Malt, too, might be kept on board, and infuſed with boiling water at any time. This liquor, when drank even in the form of wort, is very wholeſome, and is found to be an excellent antidote againſt the ſcurvy. Small wines and cyder might likewiſe be plentifully laid in; and ſhould they turn ſour, they would ſtill be uſeful, as vinegar. Vinegar is a very great antidote againſt diſeaſes, and ſhould be uſed by all travellers, eſpecially at ſea.

Such animals as can be kept alive ought likewiſe to be carried on board, as hens, ducks, pigs, &c. Freſh broths made of portable ſoup, and puddings made of peaſe, or other vegetables, ought to be uſed frequently. Many other things will occur to people converſant in theſe matters, which would tend to preſerve the health of that brave and uſeful ſet of men. Pity it is that ſo little attention ſhould be paid to theſe things by ſuch as have it in their power to rectify them; but intereſt blinds the eyes of ſome, while others, totally regardleſs of the future,

ture, will make no proviſion againſt diſeaſes till they feel them.

There is reaſon to believe, if care were taken with reſpect to the diet, air, clothing, &c. of ſea-faring people, that they would be the moſt healthy ſet of men in the world; but when theſe are not duly regarded, the very reverſe muſt happen.

Peruvian bark is the beſt *medical antidote* that we can recommend to ſailors or ſoldiers on foreign coaſts. This will often prevent fevers, and other fatal diſeaſes. A drachm or ſo of it may be chewed every day; or if this ſhould prove diſagreeable, an ounce of bark, with half an ounce of orange-peel, and two drachms of ſnake-root coarſely powdered, may be infuſed for two or three days in an Engliſh quart of brandy, and half a wine-glaſs of it taken twice or thrice a-day, when the ſtomach is moſt empty. This has been found to be an excellent antidote againſt fluxes, putrid, intermitting, and other fevers, in unhealthy climates. It is not material in what form this medicine be adminiſtered. It may either be infuſed in water, wine, or ſpirits, as recommended above, or made into an electuary, with ſyrup of lemons, oranges, or the like.

THE SEDENTARY.

Though nothing can be more contrary to the nature of man than a ſedentary life, yet the far greater part of the human ſpecies are comprehended under this claſs. Almoſt the whole female world, and, in manufacturing countries, the major part of the males, may be reckoned ſedentary.

Agriculture, the firſt and moſt healthful of all employments, is now followed by few who are able to carry on any other buſineſs. Thoſe who imagine that

that the culture of the earth is not ſufficient to employ all its inhabitants, are greatly miſtaken. An ancient Roman, we are told, could maintain his family from the produce of one acre of ground. So might a modern Briton, if he could be contented to live like a Roman. This ſhows what an immenſe increaſe of inhabitants Britain might admit of, and all of them live by the culture of the ground. Agriculture is the great ſource of domeſtic riches. It is of all employments the moſt favourable to health and population. When it is neglected, whatever wealth may be imported from abroad, poverty, wretchedneſs, and miſery, will abound at home. Such is, and ever will be, the fluctuating nature of manufactures, that ten thouſand people may be in bread to-day, and in beggary to-morrow. This can never happen to thoſe who cultivate the ground. They can eat the fruit of their labour, and can always by induſtry obtain, at leaſt, the neceſſaries of life.

Though ſedentary employments be neceſſary, yet there ſeems to be no reaſon why any perſon ſhould be confined for life to theſe alone. Were ſuch employments intermixed with the more active and laborious, they would never do hurt. 'Tis conſtant confinement that ruins the health. A man may not be hurt by ſitting four or five hours a-day, who, were he obliged to ſit ten or twelve, would ſoon contract diſeaſes.

But it is not want of exerciſe alone which hurts ſedentary people; they often ſuffer from the unwholeſome air which they breathe. It is very common to ſee ten or a dozen tailors, or ſtay-makers, for example, crowded into one ſmall apartment, where there is hardly room for one ſingle perſon to breathe freely. In this ſituation they generally continue for many hours at a time, with often the addition of ſundry candles, which help to waſte the air, and render it leſs fit for reſpiration. Air that

is breathed over and over, loſes its ſpring, and becomes unfit for expanding the lungs *. This is one cauſe of the phthſical coughs, and other complaints of the breaſt, ſo incident to ſedentary artificers.

Even the perſpiration from a great number of bodies pent up together, renders the air unwholeſome. The danger from this quarter is greatly increaſed, if any one of them happen to have bad lungs, or be otherwiſe diſeaſed. Thoſe who ſit near him, being forced to breathe the ſame air, can hardly fail to be infected. It would be a rare thing, indeed, to find a dozen of ſedentary people all ſound. The danger of crowding them together muſt therefore be evident to every one.

Many of thoſe who follow ſedentary employments are conſtantly in a bending poſture, as ſhoemakers, tailors, cutlers, &c. Such a ſituation is extremely hurtful. A bending poſture obſtructs all the vital motions, and of courſe muſt ruin the health. Accordingly we find ſuch artificers generally complain of indigeſtions, flatulencies, head-achs, pains of the breaſt, &c. In ſuch people the firſt concoction is generally bad; and as that fault can never be mended in any of the ſubſequent ones, it cannot fail to induce a total vitium of the humours, which paves the way to innumerable diſeaſes.

The aliment in ſedentary people, inſtead of being puſhed forwards by an erect poſture, the action of the muſcles, &c. is in a manner confined in the bowels. Hence coſtiveneſs, wind, and other hypochondriacal ſymptoms, the never-failing companions of the ſedentary. Indeed none of the excretions can be duly performed where exerciſe is wanting; and when any one of theſe is retained too long in the body, it muſt have bad effects, as it is again taken up into the maſs of humours.

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* We have already had occaſion to obſerve, that it is by loſing its oxygen that air becomes unfit for reſpiration.

A bending poſture is very hurtful to the lungs. When this organ is compreſſed, the air cannot have free acceſs into all its parts, ſo as to expand them properly. Hence tubercles, adheſions, &c. are formed, which often end in conſumptions. The proper action of the lungs is likewiſe neceſſary for making good blood. When that organ fails, the humours ſoon become univerſally depraved, and the whole conſtitution goes to wreck. In fine, both the pectoral and abdominal viſcera ought to be kept as free and eaſy as poſſible. Their continual action is abſolutely neceſſary to life, and being of a ſoft texture, their functions are eaſily obſtructed by any ſort of preſſure.

The ſedentary are not only hurt by preſſure on the bowels, but alſo on the inferior extremities, which obſtructs the circulation in theſe parts, and renders them weak and feeble. Thus tailors, ſhoemakers, &c. frequently loſe the uſe of their legs altogether; beſides the blood and other humours, by ſtagnating in theſe parts, are vitiated; from whence proceed the ſcab, ulcerous ſores, foul blotches, and other cutaneous diſeaſes, ſo common among ſedentary artificers.

A bad figure of body is a very common conſequence of cloſe application to ſedentary employments. The ſpine, for example, by being continually bent, puts on a crooked ſhape, and generally remains ſo ever after. But a bad figure of body has already been obſerved to be hurtful to health, as the vital functions, &c. are thereby impeded.

A ſedentary life never fails to occaſion an univerſal relaxation of the ſolids. This is the grand ſource from whence moſt of the diſeaſes of ſedentary people flow. The ſcrophula, conſumption, rickets, and many other maladies which now abound, were very little known in this country be-

fore ſedentary artificers became ſo numerous; and they are very little known ſtill among ſuch of our people as follow active employments without doors, though in the great manufacturing towns, at leaſt two thirds of the inhabitants are afflicted with them.

It is the more difficult to remedy thoſe evils, becauſe many who have been accuſtomed to a ſedentary life, like rickety children, loſe all inclination for exerciſe; we ſhall, however, give a few hints with reſpect to the moſt likely means for preſerving the health of this uſeful ſet of people, which ſome of them, we hope, will be wiſe enough to obſerve.

It has been obſerved, that ſedentary artificers are often hurt by their bending poſture. They ought, therefore, to ſtand or ſit as erect as the nature of their employments will permit. They ſhould likewiſe change poſtures frequently, and ſhould never ſit too long at a time, but leave off work, and walk, ride, run, or do any thing that will promote the vital functions.

Sedentary artificers are allowed too little time for exerciſe; yet, ſhort as it is, they ſeldom employ it properly. A journeyman tailor or weaver, inſtead of walking abroad for exerciſe and freſh air at his hours of leiſure, chuſes often to ſpend them in a public houſe, or in purſuing ſome ſedentary diverſion, at which he generally loſes both his time and money.

The aukward poſtures in which many ſedentary artificers work, ſeem rather to be the effect of cuſtom than neceſſity. For example, a table might ſurely be contrived for ten or a dozen tailors to ſit round it, with liberty for their legs either to hang down, or reſt upon a foot-board, as they ſhould chuſe. A place might be cut out in the table for every perſon to ſit in, by which means his work would

would lie as ready to his hand, as in the preſent mode of ſitting croſs-legged.

We would recommend to all ſedentary artificers the moſt religious regard to cleanlineſs. Both their ſituation and occupations render this highly neceſſary. Nothing would contribute more to preſerve ſedentary artificers in health, than a ſtrict attention to this rule; and ſuch of them as neglect it, not only run the hazard of loſing their health, but of becoming a nuiſance to ſociety.

Sedentary people ſhould live ſparingly. They ought likewiſe to avoid food that is windy, or hard of digeſtion, and ſhould pay the ſtricteſt regard to ſobriety. A perſon who works hard without doors will ſoon throw off an overcharge of liquors, but one who ſits has by no means an equal chance. Hence it often happens, that ſedentary people are ſeized with fevers after hard drinking. When ſuch people feel their ſpirits low, inſtead of running to the tavern for relief, they ſhould ride, or walk into the fields. This would remove the complaint more effectually than ſtrong liquor, and would never hurt the conſtitution.

Inſtead of multiplying rules for preſerving the health of the ſedentary, we ſhall recommend the following general plan, viz. That every perſon who follows a ſedentary employment ſhould cultivate a piece of ground with his own hands. This he might dig, plant, ſow, and weed at his leiſure-hours, ſo as to make it both an exerciſe and amuſement, while it produced many of the neceſſaries of life. After working an hour in a garden, a man will return with more keenneſs to his employment within doors, than if he had been all the while idle.

Labouring the ground is every way conducive to health. It not only gives exerciſe to every part of the body, but the very ſmell of the earth and

freſh herbs, revive and chear the ſpirits, whilſt the perpetual proſpect of ſomething coming to maturity, delights and entertains the mind. We are ſo made as to be always pleaſed with ſomewhat in proſpect, however diſtant or however trivial. Hence the happineſs that moſt men feel in planting, ſowing, building, &c. Theſe ſeem to have been the chief employments of the early ages; and when kings and conquerors cultivated the ground, there is reaſon to believe, that they knew as well wherein ture happineſs conſiſted as we do.

It may ſeem romantic to recommend gardening to manufacturers in great towns; but obſervation proves, that the plan is very practicable. In the town of Sheffield, in Yorkſhire, where the great iron manufacture is carried on, there is hardly a journeyman cutler who does not occupy a piece of ground which he cultivates as a garden. This practice has many ſalutary effects. It not only induces theſe people to take exerciſe without doors, but alſo to eat many greens, roots, &c. of their own produce, which they would not think of purchaſing. There ſeems to be no reaſon why manufacturers in any other town in Great Britain ſhould not follow this example.

Mechanics are too much inclined to crowd into great towns. This ſituation may have ſome advantages; but it has many diſadvantages. All mechanics who live in the country, have it in their power, and indeed moſt of them do occupy a piece of ground, which not only gives them exerciſe, but enables them to live more comfortably. So far at leaſt as our obſervation reaches, mechanics who live in the country are far more happy than thoſe in great towns. They enjoy better health, live in greater affluence, and ſeldom fail to rear a healthy and numerous offſpring.

In a word, exerciſe without doors, in one ſhape

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or other, is abſolutely neceſſary to health. Thoſe who neglect it, though they may or a while drag out life, can hardly be ſaid to enjoy it. Their humours are generally vitiated, their ſolids relaxed and weak, and their ſpirits low and depreſſed.

THE STUDIOUS.

Intense thought is ſo deſtructive to health, that few inſtances can be produced of ſtudious perſons who live to an extreme old age. Hard ſtudy always implies a ſedentary life; and when want of exerciſe is joined to intenſe thinking, the conſequences muſt be bad. We have frequently known even a few months intenſe ſtudy ruin an excellent conſtitution, and bring on a train of nervous complaints, which never could be removed. Man is evidently not formed for continual thought, more than for perpetual action, and would be as ſoon worn out by the one as by the other.

So great is the power of the mind over the body, that by its influence the whole vital motions may be accelerated or retarded, to almoſt any degree. Chearfulneſs and mirth quicken the circulation, and promote all the ſecretions; whereas ſadneſs and profound thought never fail to retard them. Thus even a degree of thoughtleſſneſs is neceſſary to health. The perpetual thinker ſeldom enjoys either health or ſpirits; while the perſon who can hardly be ſaid to think at all, ſeldom fails to enjoy both. The mind, by a habit of thinking, in ſome meaſure loſes the power of unbending itſelf. This may be called a diſeaſe of the mind, and ſhould be as carefully guarded againſt as any other malady.

Perpetual thinkers, as they are called, ſeldom think to much purpoſe. Such people, in a courſe

of years, generally become quite ſtupid, and exhibit a melancholy proof how readily the greateſt bleſſings may be abuſed. Study, like all other things, when carried to extreme, becomes a vice. Hence nothing can afford a greater proof of wiſdom, than for a man frequently and ſeaſonably to unbend his mind. This may always be done by chearful company, active diverſions, muſic, or the like.

The gout is the common companion of the ſtudious. This excruciating diſeaſe generally proceeds from indigeſtions, and an obſtructed perſpiration. It is impoſſible that the man who ſits all day in a cloſet ſhould either digeſt his food, or have any of the ſecretions in due quantity. When that matter, which ſhould be thrown off by the ſkin, is retained in the body, it cannot fail to vitiate the humours, and of courſe to produce the gout, or ſome other malady.

The ſtudious are often afflicted with the ſtone and gravel. Motion greatly aſſiſts the ſecretion and diſcharge of urine; conſequently a ſedentary life muſt have the contrary effect. Of this any one may be ſenſible, by obſerving, that he paſſes much more urine by day than in the night, and alſo when he walks or rides, than when he ſits. A free diſcharge of urine, not only prevents the gravel and ſtone, but many other diſeaſes.

Obſtructions of the liver prove often fatal to the ſtudious. Diſeaſes of that organ are very obſtinate, and generally complicated. The circulation in the liver being ſlow, obſtructions can hardly fail to be the conſequence of inactivity. Hence ſedentary people are frequently afflicted with ſchirrous livers, the jaundice, &c. The proper ſecretion and diſcharge of the bile is ſo neceſſary a part of the animal œconomy, that where it is not duly performed, the health muſt needs be impaired. Indigeſtion,

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loſs of appetite, and a waſting of the whole body, ſeldom fail to be the conſequences of a vitiated ſtate of the liver, or obſtructions of the bile.

Few diſeaſes prove more fatal to the ſtudious than conſumptions of the lungs. It has already been obſerved, that this organ cannot be duly expanded in thoſe who do not take proper exerciſe; and where that is the caſe, obſtructions, adheſions, &c. muſt enſue. Not only want of exerciſe, but the poſture in which ſtudious people often ſit, is very hurtful to the lungs. Thoſe who read or write much are apt to contract a habit of bending forwards, and often preſs with their breaſt upon a table or bench, &c. It is impoſſible this poſture ſhould fail to hurt the lungs. It ought therefore to be avoided with the utmoſt care.

The ſtudious are often afflicted with want of appetite and indigeſtions. Theſe lay the foundation of numerous diſeaſes. When the digeſtions fail, the humours muſt ſoon be depraved, to which ſucceed lows ſpirits, weak nerves, with the whole train of hyſteric and hypochondriac maladies.

Head-achs often afflict the ſtudious. Theſe proceed from long and intenſe thinking, and ſometimes they are aggravated by coſtiveneſs. The beſt way to prevent them is, never to ſtudy too long, and to keep the belly regular, either by proper food, or taking frequently a little of ſome opening medicine.

Diſeaſes of the eyes often afflict the ſtudious. Such therefore as read or write much ſhould early accuſtom themſelves to uſe *preſerves*. Night ſtudy is moſt deſtructive to the ſight, and ſhould never be prolonged too late. Indeed late ſtudies are not only hurtful to the eyes, but to the whole body. Nothing more certainly ruins the health, than the practice of ſpending thoſe hours in the cloſet which ſhould be allotted to ſleep. Studious perſons will find

find their eyes greatly ſtrengthened by bathing them frequently in cold water, or brandy and water mixed.

The dropſy is another of thoſe diſeaſes which commonly affect the ſtudious, and very often puts an end to their lives. It has already been obſerved, that the ſecretions are generally defective in the ſtudious, and that various diſeaſes, among which is the dropſy, are occaſioned by the retenſion of thoſe humours which ought to be thrown off in that way. Any perſon may obſerve, that ſitting makes his legs ſwell, and that this will go off by exerciſe; which clearly points out the method of prevention to all who can take it. To thoſe who cannot take exerciſe, we would recommend the uſe of the fleſh-bruſh, cold-bathing, and ſuch food as is of a bracing and ſtrengthening nature.

Fevers, eſpecially of the nervous kind, are often the effect of ſtudy. Nothing is ſo deſtructive to the nerves as intenſe thought. It is able, in a manner, to unhinge the whole machine. It not only hurts the vital motions, but diſorders the mind itſelf. Hence a delirium, melancholy, and even madneſs, are often the effect of cloſe application to ſtudy. There is no diſeaſe which can proceed either from a bad ſtate of the humours, a defect of the uſual ſecretions, or a debility of the nervous ſyſtem, which may not be brought on by intenſe thinking.

But the moſt afflicting of all the diſeaſes which attack the ſtudious, is the hypochondriacal. This ſeldom fails to be the companion of deep thought, and may rather be called a complication of maladies, than a ſingle one. To what a wretched paſs are the beſt of men often reduced by this malady? Their ſtrength and appetite fail. A perpetual gloom hangs over their minds. They live in the conſtant

conſtant dread of death, and are continually in ſearch of relief from medicine, where, alas! it is not to be found. This diſeaſe far exceeds all deſcription, and thoſe who labour under it, though they be often made the ſubject of ridicule, juſtly claim our higheſt ſympathy and compaſſion.

Nothing can be more prepoſterous than for any man to make ſtudy his ſole buſineſs. A mere ſtudent is ſeldom an uſeful member of ſociety. Indeed it rarely happens, that an uſeful invention is the effect of ſtudy. The farther that men dive into profound reſearches, they generally deviate the more from common ſenſe, and too often loſe ſight of it altogether. Hence it is that profound ſpeculations, inſtead of making men wiſer or better, generally render them mere ſceptics, and overwhelm them in doubt and uncertainty. All that is neceſſary for man to know, in order to be happy, is eaſily obtained, and the reſt, like the forbidden tree, ſerves only to increaſe his miſery.

Studious people, in order to relieve their minds, muſt not only diſcontinue to read and write, but engage in ſome employment or amuſement, that will ſo far occupy the thought as to make them forget the buſineſs of the cloſet. A ſolitary ride or walk are ſo far from relieving the mind, that they rather encourage thought. Nothing can divert the mind, when it gets into a train of ſerious thinking, but an attention to ſubjects of a more trivial nature. Theſe, when compared with the other, prove a kind of play to the mind, and conſequently relieve it.

Thinking men are apt to contract a contempt for what they call trifling company. They are aſhamed to be ſeen with any but philoſophers. This, however, is no proof of their being philoſophers themſelves. No man deſerves the name of a philoſopher who is aſhamed to unbend his mind by aſſociating

aſſociating with the chearful and gay. Even the ſociety of children will relieve the mind, and expel the gloom which application to ſtudy is too apt to occaſion. It is remarkable, that ſuch as have numerous families, whatever hardſhips they may labour under, are generally the moſt chearful and happy.

As ſtudious people are neceſſarily much within doors, they ſhould make choice of a large and well-aired place for ſtudy. This would not only prevent the bad effects which attend confined air, but would chear the ſpirits, and have a moſt happy influence both on the body and mind. It is ſaid of Euripides the Tragedian, that he uſed to retire to a dark cave to compoſe his tragedies, and of Demoſthenes the Grecian orator, that he choſe a place for ſtudy where nothing could be either heard or ſeen. With all deference to ſuch venerable names, we cannot help condemning this taſte. A man may ſurely think to as good purpoſe in an elegant apartment as in a cave; and may have as happy ideas where the all-cheering rays of the ſun render the air wholeſome, as in places where they never reach.

Thoſe who read or write much ſhould be very attentive to their poſture. They ought to ſit and ſtand by turns, always keeping as near an erect poſture as poſſible. Thoſe who dictate may do it walking. It has an excellent effect frequently to read or ſpeak aloud. This not only exerciſes the lungs, but almoſt the whole body. Hence ſtudious people are greatly benefited by delivering diſcourſes in public. Such indeed ſometimes hurt themſelves by over-acting their part; but that is their own fault. The man who dies a martyr to mere vociferation, merits not our ſympathy.

The morning has by all medical writers been reckoned the beſt time for ſtudy. It is ſo. But it

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is alſo the moſt proper ſeaſon for exerciſe, while the ſtomach is empty, and the ſpirits refreſhed with ſleep. Studious people ſhould therefore frequently ſpend the morning in ſome manly diverſion abroad. This would make them return to ſtudy with greater alacrity, and would be of more ſervice than twice the time after their ſpirits are worn out with fatigue.. It is not ſufficient to take diverſion only when we can think no longer. Every ſtudious perſon ſhould make it a part of his buſineſs, and ſhould let nothing interrupt his hours of recreation, more than thoſe of the ſtudy.

Muſic has a moſt happy effect in relieving the mind. It would be well if every ſtudious perſon were ſo far acquainted with that ſcience, as to amuſe himſelf after ſevere thought, by playing ſuch airs as have a tendency to rouſe the ſpirits, and inſpire chearfulneſs and good humour.

Studious perſons generally ſpend their mornings in the cloſet, and their evenings in company. It were better to invert this rule. It is the reproach of learning, that ſo many of her ſons, to relieve the mind after ſtudy, betake themſelves to the uſe of ſtrong liquors. This indeed is a remedy; but it is a deſperate one, and always ends in deſtruction. Would ſuch perſons, when their ſpirits are low, get on horſeback, and gallop ten or a dozen miles, they would find it a more effectual remedy than all the ſtrong liquors in the world. A good horſe is the beſt preventive medicine that we can recommend to the ſtudious. This is better than all the nervous antidotes of the ſhops, and will in the end be found much cheaper.

It is really to be regretted, that men, while in health, pay ſo little regard to theſe things. How common is it to ſee a wretch, over-run with nervous diſeaſes, bathing, walking, riding, and, in a word,

word, doing every thing for health after it is gone; yet, if any one had recommended theſe things by way of prevention, his advice would have been treated with contempt, or at leaſt with neglect. Such is the weakneſs of human nature, and ſuch the folly and want of foreſight even of thoſe who ought to be the wiſeſt of mankind!

PART

PART II.

OF DISEASES.

CHAP. IV.

OF DISTINGUISHING AND CURING DISEASES.

BEFORE we proceed to the particular treatment of diſeaſes, it will be neceſſary to lay down ſome general rules for diſtinguiſhing one diſeaſe from another, as the danger of miſtaking the diſeaſe often deters people from attempting to relieve the ſick.

To diſtinguiſh diſeaſes is the moſt difficult part of the practice of phyſic. So near a reſemblance do the ſymptons of one diſeaſe often bear to thoſe of another, that they may deceive the moſt ſkilful phyſician. We do not mean in this place to give the diſtinguiſhing marks of every particular diſeaſe, but only to put the reader upon his guard, by pointing out a few of thoſe diſeaſes which have the neareſt reſemblance to one another, and which the unwary and inattentive may be moſt apt to miſtake.

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The ſmall-pox and meaſles are both preceded by chilneſs and ſhivering, with heat and cold by turns, a quick pulſe, great thirſt, and other ſymptoms of a fever. In both, the eruption appears about the third or fourth day, in little ſpots reſembling flea-bites. Thus far the diſeaſe cannot be certainly known; but on the ſecond or third day from the eruption, the ſmall-pox begin to riſe and to fill with matter; which plainly ſhows the nature of the diſeaſe.

The petechial or ſpotted fever, may be known from the miliary by this mark, that in the former the ſpots never riſe above the ſkin, whereas, in the latter, the ſkin is rough, and before the eruption appears, the patient complains of chilneſs, itching in the ſkin, and oppreſſion of the breaſt.

Though there be a great ſimilarity in the firſt ſymptoms of all fevers, yet an attentive obſerver may generally diſcover to what claſs they belong. Thus a burning fever may be known by the intenſe heat of the whole body, a dry parched ſkin, a chapt tongue, and unquenchable thirſt. Malignant fevers are generally owing to infection. They may be known by the patient's ſudden loſs of ſtrength, perpetual watching, &c. A catarrhal fever is known by a running at the noſe, a hoarſeneſs, and a ſenſe of fulneſs in the breaſt.

The peripneumony and pleuriſy may be diſtinguiſhed by this, that in the latter the pain is more acute, and in the former the oppreſſion of the breaſt and difficulty of breathing are greater; and the ſpittle is generally tinctured with blood.

Intermittent fevers or agues are known by their leaving the patient, and returning at certain periods, as once a-day, once in two days, three days, or the like. They are denominated from the ſpace between the fits, as quotidian, or every-day agues, tertian,

tertian, or ſuch as return every other day, quartan, &c.

A hectic fever may be known by its ſupervening to ſome other diſorder, as the dropſy, conſumption, ſcurvy, &c. It differs from a ſlow fever in this, that the pulſe is always quick, but remarkably ſo in the morning; whereas, the pulſe in a ſlow fever is more natural in a morning, and before meals, though it be more quick after eating: Beſides, in a ſlow fever the weakneſs is not ſo great as in a hectic.

An inflammation of the ſtomach may be diſtinguiſhed from a cardialgia, an inflammation of the liver, &c. by a ſenſe of the moſt intenſe heat in the ſtomach, a fever attended with a quick, unequal, and weak pulſe, and a prodigious uneaſineſs upon taking any thing into the ſtomach.

An inflammation in the concave part of the liver may be diſtinguiſhed from the baſtard pleuriſy, by the fever being leſs violent, the breathing eaſier, and the pain lower down. Beſides, the baſtard pleuriſy generally goes off on the ſeventh day; whereas, the inflammation of the liver is a tedious diſeaſe, and often ends in an abſceſs, which occaſions a hectic fever, or a dropſy, &c.

A phrenzy, or inflammation of the membranes of the brain, may be diſtinguiſhed from madneſs, a common delirium, the hydrophobia, &c. by the burning fever, the continual watching, and the violent pulſation of the arteries about the head and temples, which always attend it. It differs from a delirium, in being more violent; from madneſs, in being an acute diſeaſe; and from the hydrophobia in this, that the patient has no averſion from liquids.

A nephritis, or inflammation of the kidneys, may be diſtinguiſhed from a fit of the gravel, by a fixed, dull, preſſing pain in the loins, which

continues long; whereas, the pain in a fit of the gravel is more violent, leſs fixed, and generally extends downwards.

External inflammations are eaſily diſtinguiſhed. An *eryſipelas*, or St Anthony's fire, only affects the ſkin with redneſs, tumour, and pain; whereas, a *phlegmon* reaches to the ſubjacent muſcles, and a *gangrene* penetrates not only the muſcles, but even the tendinous and nervous parts, and is attended with great heat, pain, and redneſs, which at length change into a livid or black colour.

A ſtone deſcending by the ureters may eaſily be miſtaken for a fit of the cholic, as both are attended with violent pain, vomiting, &c. In the former, however, the pain is more fixed in the loins, is attended with ſhiverings, and as the ſtone deſcends, the pain reaches downwards, and occaſions a numbneſs of the thigh on the ſide affected; there is alſo a frequent inclination to paſs water, with ſome degree of ſtrangury; whereas, in the cholic, the pain is chiefly about the navel, and the belly is generally diſtended with wind.

The gout may be diſtinguiſhed from the rheumatiſm, by its attacking the extremities chiefly, and being attended with a greater inflammation, and more violent pain. It may likewiſe be diſtinguiſhed from venereal pains, by its being more violent in the day; whereas, they are moſt ſevere in the night.

The piles may be miſtaken for a dyſentery, as both tinge the ſtools with blood, though the one be a dangerous diſeaſe, and the other in many caſes a ſalutary evacuation. In the piles, however, the blood flows without pain or gripes; whereas, in the dyſentery, the ſtools are attended with the moſt violent gripes, ſpaſms, &c.

Coughs may be owing to cold, an ulcer in the lungs, an aſthma, &c. The beſt way to diſtinguiſh them

them is, to examine into the cauſe, to obſerve what the patient ſpits, and to mark the continuance of the diſeaſe. A cough occaſioned by catching cold, is generally attended with a diſcharge of phlegm, and is ſeldom of long continuance. That which is owing to an ulcer of the lungs, is generally attended with an hectic fever, and the ſpittle is mixed with matter. An aſthmatic cough is generally owing to wind or ſpaſms, and ſeldom admits of relief from medicine.

A head-ach, which proceeds from too great a quantity of blood being forced into the veſſels of the brain, is generally attended with heat, redneſs, and a ſwelling of the face, a great pulſation of the arteries of the neck, &c. That kind of head-ach, which is the effect of venereal contagion, may be known by its being generally worſt in the night. When the head-ach is owing to an effuſion of ſerum or blood into the ſinuoſities of the bones of the forehead, the pain is obſtinate, ſharp, and fixed; it is generally ſituated in the bottom of the forehead, and above the eyes. When the head is diſordered from crudities in the ſtomach or wind, it may be known from belching, and the increaſe of the diſorder upon uſing flatulent food, &c.

An apoplexy may be diſtinguiſhed from a ſyncope, or fainting fit, by the colour of the face, the breathing, and the pulſe continuing much the ſame as in health; whereas, in a ſyncope, the pulſe and breathing are imperceptible, the face is pale, and the body grows cold. An apoplexy may be diſtinguiſhed from a catalepſy, becauſe the latter comes on ſuddenly, and keeps the member quite rigid, and in the ſame poſture as at the time of the attack.

A proper attention to the age, ſex, conſtitution, temper of mind, &c. of the patient, would greatly aſſiſt us in finding out and diſtinguiſhing diſeaſes.

Thus, in children the fibres are lax and ſoft; in adults, rigid and tenſe. In young people, the nerves are extremely irritable, and the fluids thin. In old age, the nerves become almoſt inſenſible, and many of the veſſels imperviable. Theſe, and numberleſs other peculiarities, render the diſeaſes of the young and thoſe of the aged very different; and of courſe they muſt require different treatment.

Not only the age, but alſo the ſex of the patient, claims our attention. Females are liable to many peculiar diſeaſes. Their nervous ſyſtem being weak and delicate, they are eaſier affected with ſpaſtic or convulſive diſorders than males. This is the true ſource of moſt of the diſeaſes of the fair ſex, and ought always to be kept in view in the treatment of their diſorders.

We ought likewiſe to attend to the particular conſtitution. This not only prediſpoſes perſons to peculiar diſeaſes, but likewiſe makes it neceſſary that their diſeaſes be treated in a very different manner. For example, a delicate perſon, with weak nerves, can neither bear bleeding, nor any other evacuation, to the ſame extent as one whoſe conſtitution is hardy and robuſt.

The temper of mind ought likewiſe to be attended to in diſeaſes. Fear, anxiety, and a fretful temper, both occaſion and aggravate diſeaſes. The medicine of the mind is too little regarded. In vain do we apply medicines to the body to remove diſeaſes which proceed from the mind. When that is the caſe, the beſt medicine is to ſoothe the paſſions, divert the mind from anxious thought, and to cheriſh the hopes of the patient.

Attention ought likewiſe to be paid to the place where the patient lives, the air he breathes, his diet, occupation, &c. Such as live in low marſhy countries, are ſubject to many diſeaſes which are unknown

unknown to the inhabitants of high countries. Thoſe who breathe the impure air of cities, have many maladies, to which the more happy ruſtics are ſtrangers. Such as feed groſsly, and indulge in ſtrong liquors, are liable to diſeaſes which do not affect the temperate and abſtemious. The ſituation of life, as has been obſerved, likewiſe prediſpoſes men to peculiar diſeaſes. Thus the laborious, the ſedentary, the ſtudious, &c. are liable to particular maladies from the very occupations which they follow.

It is neceſſary to inquire, whether or not the patient has been guilty of any exceſs in eating or drinking, if he has overſtrained himſelf, has drank cold liquor when he was warm, lain on the damp ground, changed his uſual clothing, or, in a word, done any thing that might obſtruct the perſpiration. It will alſo be proper to inquire, if any uſual evacuation, as ſweeting of the feet, iſſues, &c. has been ſtopped. The ſtate of the belly ſhould likewiſe be inquired into. Coſtiveneſs alone will occaſion diſeaſes, and the removing of it will cure them.

It is likewiſe neceſſary to inquire, what diſeaſes the patient has formerly been moſt liable to, and what medicines were moſt beneficial. If medicines have been adminiſtered, it will be proper to inquire into their effect. It will likewiſe be neceſſary to inquire, what kind of medicines are moſt agreeable to the patient, or if he has an averſion to any particular drug, &c.

It is alſo neceſſary to inquire, whether the patient can perform with eaſe all the animal and vital functions, or which of them gives him pain; and alſo to inquire, if all the different ſecretions go duly on, as the perſpiration, diſcharge of urine, &c.

The nature of the diſeaſe is likewiſe to be in-

quired into, as, whether it be primary or ſecondary; whether ſimple or complicated with ſome other diſeaſe; whether it be external or internal; whether epidemic or not; whether it be the effect of age, intemperance, infection, or owing to a vitiated ſtate of the humours, &c. &c. &c.

OF FEVERS IN GENERAL.

A FEVER is the moſt general diſeaſe incident to mankind. It attacks every age, ſex, and conſtitution, and affects every part of the body; nor is the mind itſelf free from its influence. A fever is known by a quick pulſe, an increaſed heat, and a difficulty in performing ſome of the vital or animal functions, as breathing, walking, &c *.

Fevers are divided into continual, remitting, and intermitting. By a continual fever is meant, that which never leaves the patient during the whole courſe of the diſeaſe, or which ſhews no remarkable increaſe or abatement in the ſymptoms. This kind of fever is likewiſe divided into acute, ſlow, and malignant. The fever is called *acute*, when its progreſs is quick, and the ſymptoms violent; but when theſe are more gentle, it is generally denominated *ſlow*. When lived or petechial ſpots ſhow a putrid ſtate of the humours, the fever is called *malignant*, *putrid*, or *petechial*.

A remitting fever differs from a continual, only in degree. It has frequent increaſes and decreaſes, or

* The characteriſtic ſymptoms of fever are ſickneſs and nauſea, a ſenſe of debility or languor, pain of the head or back, a rigor or chilline's alternating with hot fits or fluſhings, a ſenſe of thirſt, with a parched foul tongue, a dry hot ſkin, a quick pulſe—and theſe ſymptoms without any *primary local affection*.

or exacerbations and remiſſions, but never wholly leaves the patient during the courſe of the diſeaſe. Intermitting fevers, or agues, are thoſe which, during the time that the patient may be ſaid to be ill, have evident intervals or remiſſions of the ſymptoms.

As a fever is nothing elſe but an effort of Nature to free herſelf from an offending cauſe, it is the buſineſs of thoſe who have the care of the ſick, to obſerve with diligence, which way Nature points, and to endeavour to aſſiſt her operations. Our bodies are ſo framed, as to have a conſtant tendency to expel or throw off whatever is injurious to health. This is generally done by urine, ſweat, ſtool, expectoration, vomit, or ſome other evacuation.

There is reaſon to believe, if the efforts of Nature, at the beginning of a fever, were duly attended to and promoted, it would ſeldom continue longer than twenty-four hours; but when her attempts are either neglected, or counteracted, it is no wonder if the diſeaſe be prolonged. There are daily inſtances of perſons, who, after catching cold, have all the ſymptoms of a beginning fever; but by keeping warm, drinking diluting liquors, bathing their feet in warm water, &c. the ſymptoms in a few hours diſappear, and the danger is prevented. In a word, almoſt every fever proceeding from an obſtructed perſpiration, might be carried off, or its danger prevented, by timely care.

Our deſign is not to enter into a critical inquiry into the nature, cauſes, &c. of fevers, but to mark their moſt obvious ſymptoms, and to point out the proper treatment of the patient, with reſpect to his diet, drink, air, warmth, &c. in the different ſtages of the diſeaſe. In theſe articles, the inclinations of the patient will, in a great meaſure, direct our conduct.

Almoſt every perſon in a fever complains of great thirſt, and calls out for drink, eſpecially of a cooling nature. This at once points out the uſe of *water*, which we may venture to call the greateſt febrifuge in nature. What is ſo likely to abate the heat, attenuate the humours, remove ſpaſms and obſtructions, promote perſpiration, increaſe the quantity of urine, and, in ſhort, produce every ſalutary effect, in an ardent or inflammatory fever, as drinking plentifully of water, thin gruel, or any other weak, diluting liquor, of which water is the baſis? The neceſſity of diluting liquors is pointed out by the dry tongue, the parched ſkin, and the burning heat, as well as by the unquenchable thirſt of the patient *.

Many cooling liquors, which are extremely grateful to patients in a fever, may be prepared from fruits, roots, and acid vegetables, as decoctions of tamarinds, apple-tea, orange-whey, and the like. Mucilaginous liquors might alſo be prepared from marſh-mallow roots, linſeed, lime-tree buds, and many other vegetables. Theſe liquors, eſpecially when acidulated, are highly agreeable to the patient, and ſhould never be denied him.

At the beginning of a fever, the patient generally complains of great laſſitude or wearineſs, and has no inclination to move. This evidently ſhows the propriety of keeping him eaſy, and, if poſſible, in bed; which relaxes the ſpaſms, abates the violence of the circulation, and gives Nature an opportunity of exerting all her force to overcome the diſeaſe. The bed alone would often remove a fever at the beginning; but when the patient ſtruggles with the diſeaſe, inſtead of driving it off, he

* Vomiting, by freeing the ſyſtem from a load of undigeſted ſtimulating food, is frequently of the greateſt ſervice, and therefore ought not to be neglected, at the commencement of fevers. It may even frequently be repeated with advantage.

he only fixes it the deeper, and renders it more dangerous. This obſervation is too often verified in travellers, who happen, when on a journey, to be ſeized with a fever. Their anxiety to get home, induces them to travel with the fever upon them; which conduct ſeldom fails to render it fatal.

In fevers, the mind as well as the body ſhould be kept eaſy. Company is ſeldom agreeable to the ſick. Indeed every thing that diſturbs the imagination, increaſes the diſeaſe; for which reaſon, every perſon in a fever ought to be kept perfectly quiet, and neither allowed to ſee nor hear any thing that may in the leaſt affect or diſcompoſe his mind.

Though a perſon in a fever has the greateſt inclination for drink, yet he ſeldom has any appetite for ſolid food; from whence we may ſee the impropriety of loading his ſtomach with victuals. Much ſolid food in a fever is every way hurtful. It oppreſſes nature, and inſtead of nouriſhing the patient, ſerves only to feed the diſeaſe. What food the patient takes, ſhould be in ſmall quantity, light, and eaſy of digeſtion. It ought to be chiefly of the vegetable kind, as water-pap, roaſted apples, water-gruel, and ſuch like.

Poor people, when any of their family are taken ill, run directly to their rich neighbours for cordials, and pour wines, ſpirits, &c. into the patient, who perhaps never had been accuſtomed to taſte ſuch liquors when in health. If there be any degree of fever, this conduct muſt increaſe it; and if there be none, this is the ready way to raiſe one. Stuffing the patient with ſweet-meats, and other delicacies, is likewiſe very pernicious. Theſe are always harder to digeſt than common food, and cannot fail to do hurt.

Nothing is more deſired by a patient in a fever, than freſh air. It not only removes his anxiety, but

but cools the blood, revives the ſpirits, and proves every way beneficial. Many patients are in a manner ſtiffled to death in fevers, for want of freſh air; yet ſuch is the unaccountable infatuation of many people, that the moment they think a perſon in a fever, they imagine he ſhould be kept in a cloſe chamber, into which not one particle of freſh air muſt be admitted. There ought to be a conſtant ſtream of freſh air into a ſick perſon's chamber, ſo as to keep it always in a temperate degree of warmth, which ought never to be greater than is agreeable to one in perfect health.

Nothing ſpoils the air of a ſick perſon's chamber, or hurts the patient more, than a number of people breathing in it. When the blood is inflamed, or the humours in a putrid ſtate, air that has been breathed over and over will greatly increaſe the diſeaſe. Such air not only loſes its ſpring, and becomes unfit for the purpoſes of reſpiration, but acquires a noxious quality, which renders it in a manner poiſonous to the ſick *.

In fevers, when the patient's ſpirits are low and depreſſed, he is not only to be ſupported with cordials, but every method ſhould be taken to cheer and comfort his mind. Many, from a miſtaken zeal, when they think a perſon in danger, inſtead of

* As the volume of air in the lungs has been long known to be diminiſhed by reſpiration; ſo this was *formerly* explained by ſaying, that the air had loſt its ſpring or elaſticity; and this loſs of ſpring again ſerved to explain why the air was become unfit for reſpiration. *Later* diſcoveries, however, enable us to account for theſe phenomena in a more ſatisfactory manner. From theſe we learn, that atmoſpheric air conſiſts of two principles, namely, vital air, and mephetis, or nitrogene gas, as it has been called. Of theſe two principles, the one only, viz. vital air, ſerves the purpoſes of reſpiration. During this proceſs, there is a conſtant waſte, or rather abſorption of this principle. If this waſte be not conſtantly ſupplied by an influx of freſh air, the remainder becomes in time totally unfit for the purpoſe: and this will happen ſooner or later, in proportion as the waſte has been greater, or the ſupply leſs.

of ſolacing his mind with the hopes and conſolations of religion, fright him with the views of hell and damnation, &c. It would be unſuitable here to dwell upon the impropriety and dangerous conſequences of this conduct; it often hurts the body, and there is reaſon to believe, ſeldom benefits the ſoul.

Amongſt common people, the very name of a fever generally ſuggeſts the neceſſity of bleeding. This notion ſeems to have taken its riſe from moſt fevers having been formerly of an inflammatory nature; but true inflammatory fevers are now ſeldom to be met with. Sedentary occupations, and a different manner of living, has ſo changed the ſtate of diſeaſes in Britain, that there is now hardly one fever in ten where the lancet is neceſſary. In moſt low, nervous, and putrid fevers, which are now ſo common, bleeding is really hurtful, as it weakens the patient, and ſinks his ſpirits, &c. We would recommend this general rule, never to bleed at the beginning of a fever, unleſs there be evident ſigns of inflammation. Bleeding is an excellent medicine when neceſſary, but ſhould never be wantonly performed.

It is likewiſe a common notion, that it is always neceſſary to raiſe a ſweat in the beginning of a fever. As fevers often proceed from an obſtructed perſpiration, this notion is not ill founded. If the patient only lie in bed, bathe his feet and legs in warm water, and drink freely of water-gruel, or any other weak, diluting liquor, he will ſeldom fail to perſpire freely. The warmth of the bed, and the diluting drink, will relax the univerſal ſpaſm, which generally affects the ſolids at the beginning of a fever; it will open the pores, and promote the perſpiration, by means of which, the fever may often be carried off. But inſtead of this, the

the common practice is, to heap clothes upon the patient, and to give him things of a hot nature, as ſpirits, ſpiceries, &c. which fire his blood, increaſe the ſpaſms, and render the diſeaſe more dangerous.

In all fevers, a proper attention ſhould be paid to the patient's longings. Theſe are the calls of nature, and often point out what may be of real uſe. Patients are not to be wantonly indulged in every thing that the ſickly appetite may crave; but it is generally right to let them have a little of what they eagerly deſire, though it may not ſeem altogether proper. What the patient longs for, his ſtomach will generally digeſt; and ſuch things have ſometimes a very happy effect.

When a patient is recovering from a fever, great care is neceſſary to prevent a relapſe. Many perſons, by too ſoon imagining themſelves well, have relapſed, or contracted ſome other diſeaſe of an obſtinate nature. As the body after a fever is weak and delicate, it is neceſſary to guard againſt catching cold. Moderate exerciſe in the open air will be of uſe; agreeable company will alſo have a good effect. The diet muſt be light, but nouriſhing. It ſhould be taken frequently, but in ſmall quantities. It is very dangerous at ſuch a time to eat as much as the ſtomach craves.

OF INTERMITTING FEVERS, OR AGUES.

INTERMITTING fevers afford the beſt opportunity both of obſerving the nature of a fever, and alſo the effects of medicine. No perſon can be at a loſs to diſtinguiſh an intermitting fever from any other

other diſeaſe; and the proper medicine for it is now almoſt univerſally known.

The ſeveral kinds of intermitting fevers, as has been obſerved, take their names from the period in which the fit returns, as quotidians, tertians, quartans, &c.

CAUSES.——Agues are occaſioned by marſh-effluvia. This is evident from their abounding in rainy ſeaſons, and being moſt frequent in countries where the ſoil is marſhy, as in Holland, the fens of Cambridgeſhire, the Hundreds of Eſſex, &c. This diſeaſe is alſo occaſioned by eating too much ſtone-fruit, a poor watery diet, damp houſes, evening dews, lying upon the wet ground, &c. When the inhabitants of a high country remove to a low one, they ſeldom fail to catch an intermitting fever, and to ſuch the diſeaſe is moſt apt to prove fatal. In a word, whatever relaxes the ſolids, diminiſhes the perſpiration, or obſtructs the circulation in the capillary or ſmall veſſels, predispoſes the body to agues.

SYMPTOMS.——An intermitting fever generally begins with a pain of the head and loins, wearineſs of the limbs, coldneſs of the extremities, ſtretching, yawning, with ſometimes great ſickneſs and vomiting; to which ſucceed ſhivering and violent ſhaking. Afterwards the ſkin becomes moiſt, and a profuſe ſweat breaks out, which generally terminates the fit or paroxyſm. Sometimes indeed the diſeaſe comes on ſuddenly, when the perſon thinks himſelf in perfect health; but it is more commonly preceded by liſtleſſneſs, loſs of appetite, and the ſymptoms mentioned above.

REGIMEN.——While the fit continues, the patient may drink freely of water-gruel, orange-whey, weak camomile-tea; or, if his ſpirits be low, ſmall wine-whey, ſharpened with the juice of lemon. His drink ought to be a little warm,

as

as that will aſſiſt in bringing on the ſweat, and conſequently ſhorten the paroxyſm *.

Between the paroxyſms, the patient muſt be ſupported with food that is nouriſhing, but light and eaſy of digeſtion, as veal or chicken-broths, ſago, gruel with a little wine, light puddings, &c. His drink may be ſmall negus, acidulated with the juice of lemons or oranges, and ſometimes a little weak punch. He ought alſo to drink infuſions of bitters, as camomile, wormwood, or water-trefoil tea, and may now and then take a glaſs of ſmall wine, in which gentian root, centaury, or ſome other bitter, has been infuſed.

As the chief intentions of cure in an ague are to brace the ſolids, and promote perſpiration, the patient ought to take as much exerciſe between the fits as he can bear. If he be able to go abroad, riding on horſeback, or in a machine, will be of great ſervice. But if he cannot bear that kind of exerciſe, he ought to take ſuch as his ſtrength will permit. Nothing tends more to prolong an intermitting fever, than indulging a lazy indolent diſpoſition.

Intermitting fevers, under a proper regimen, will frequently go off of themſelves; and when the diſeaſe is mild, in an open dry country, there is ſeldom any danger from allowing it to take its courſe; but when the patient's ſtrength is exhauſted, and the paroxyſms are ſo violent that his life is in danger, medicine ought immediately to be adminiſtered. This, however, ſhould never be done till the diſeaſe be properly formed, that is to ſay, till the patient has had ſeveral fits of ſhaking and ſweating.

MEDI-

* Five and twenty or thirty drops of laudanum, given ſoon after the commencement of the hot fit, in a cup of the patient's drink, have been recommended, as tending greatly to promote the ſweat, and to relieve the head.

MEDICINE.——The firſt thing to be done in the cure of an intermitting fever, is to cleanſe the firſt paſſages. This not only renders the application of other medicines more ſafe, but likewiſe more efficacious. In this diſeaſe, the ſtomach is generally overcharged with cold viſcid phlegm, and frequently great quantities of bile are diſcharged by vomit; which plainly points out the neceſſity of ſuch evacuations. Vomits are therefore to be adminiſtered before the patient takes any other medicine. A doſe of ipecacoanha will generally anſwer this purpoſe very well. Half a dram or a ſcruple of the powder will be ſufficient for an adult, and for a younger perſon the doſe muſt be leſs in proportion. After the vomit begins to operate, it may be wrought off, by drinking plentifully of weak camomile tea. The vomit ſhould be taken two or three hours before the coming on of the fit, and may be repeated two or three times, at the diſtance of three or four days from each other. Vomits not only cleanſe the ſtomach, but increaſe the perſpiration, and all the other ſecretions, which render them of ſuch importance, that they often cure intermitting fevers without the aſſiſtance of any other medicine. Of this I have ſeen many inſtances, and remember myſelf to have been completely cured of a regular tertian, by taking two vomits of ipecacoanha, and obſerving proper regimen.

Purging medicines are likewiſe uſeful, and often neceſſary, in intermitting fevers. A ſmart purge has been known to cure an obſtinate ague, after the Jeſuits bark and other medicines had been uſed in vain. Vomits, however, are more ſuitable in this diſeaſe, and render purging leſs neceſſary; but if the patient be afraid to take a vomit, he ought in this caſe to cleanſe the bowels

bowels by a dose or two of Glauber's salt, jalap, or rhubarb, &c *.

Bleeding may sometimes be proper at the beginning of an intermitting fever, when excessive heat, a delirium, &c. give reason to suspect an inflammation; but as the blood is very seldom in an inflammatory state in intermitting fevers, this operation is rarely necessary.

After proper evacuations, the patient may safely use the Jesuit's bark, which may be taken in any way that is most agreeable to him. As it would answer no purpose to multiply forms, we shall only mention the following.

Two ounces of the best Jesuit's bark, finely powdered, may be divided into twenty-four doses. These may be either made into boluses as they are used, with a little syrup of lemon, or mixed in a glass of red wine, a cup of camomile-tea, water-gruel, or the like.

In an ague which returns every day, a dose of the above may be taken every two hours during the interval of the fit. By this method, the patient will be able to take five or six doses between each paroxysm. In a tertian, or third-day ague, it will be sufficient to take a dose every third hour, during the interval, and in a quartan every fourth. If the patient cannot take so large a dose of the bark, he may divide each of the powders into two parts, and take one every hour. For a young person, a smaller quantity of this medicine will

* The present practice, we believe, does not pay much attention to these formalities, whatever consequence may have been attached to them formerly. The bark is, in general, administered at the commencement of the disease, without waiting, as has been recommended, for any repetition of paroxysms, and without any previous preparation of body, a matter that made a mighty noise in former times; except where symptoms of accidental indigestion, or a redundancy of bile, seem to indicate the propriety of a puke or a purge.

will be ſufficient; and the doſe muſt be adapted to the age, conſtitution, &c *.

The above quantity will ſeldom fail to remove an ague; but the patient ought not to leave off taking the medicine ſo ſoon as the paroxyſms are ſtopped, but ſhould continue to uſe it till ſuch time as there is reaſon to believe the diſeaſe is entirely overcome. Moſt of the failures in the cure of this diſeaſe are owing to patients not continuing to uſe the medicine long enough. They are generally directed to take it till the fits are ſtopped, then to leave it off, and begin again at ſome diſtance of time; by which means the diſeaſe gathers ſtrength, and often returns with as much violence as before. A relapſe may always be prevented by the patient's continuing to take ſmall doſes of the medicine for ſome time after the ſymptoms diſappear. This is both the moſt ſafe and effectual method of cure.

An ounce of gentian root, calamus aromaticus, and orange-peel, of each half an ounce, with three or four handfuls of chamomile flowers, and an handful of coriander-ſeed, all bruiſed together in a mortar, may be uſed in form of infuſion or tea. About half an handful of theſe ingredients may be put into a tea-pot, and an Engliſh pint of boiling water poured on them. A cup of this infuſion may be drank three or four times a-day. This ſtrengthens the ſtomach, rectifies the blood, and greatly promotes the cure. Such patients as cannot drink the watery infuſion, may put two handfuls of the ſame ingredients into a bottle of white wine, and take a glaſs of it twice or thrice a-day.

* It will frequently be found neceſſary to give the bark in larger doſes, or to repeat them oftener. Indeed the beſt rule for regulating the quantity of this medicine, is to give it as often, and in as large doſes, as can be admitted of by the patient's ſtomach. In this way the diſeaſe will be ſooneſt cured, and by the ſmalleſt quantity of the medicine.

If patients drink freely of the above, or any other proper infuſion of bitters, a much ſmaller quantity of bark than is generally uſed will be ſufficient to cure an ague.

There is reaſon to believe, that ſundry of our own plants or barks, which are very bitter and aſtringent, would ſucceed well enough in the cure of intermitting fevers, eſpecially when aſſiſted by aromatics. But as the Jeſuits bark has been long approved in the cure of this diſeaſe, and is now to be obtained at a very reaſonable rate, it is of leſs importance to ſearch after new medicines. We cannot, however, omit taking notice, that the Jeſuits bark is very often adulterated, and that it requires conſiderable ſkill to diſtinguiſh between the genuine and the falſe. This ought to make people very cautious of whom they purchaſe it.

Thoſe who cannot ſwallow the bark in ſubſtance, may take it in decoction or infuſion. An ounce * of bark in powder may be infuſed in a bottle of white wine for four or five days, frequently ſhaking the bottle; afterwards let the powder ſubſide, and pour off the clear liquor. A wine-glaſs may be drank three or four times a-day, or oftener, as there is occaſion. If a decoction be more agreeable, an ounce of the bark, and two drams of ſnake-root bruiſed, with a dram of ſalt of wormwood, may be boiled in an Engliſh pint of water, into half a pint. To the ſtrained liquor may be added an equal quantity of red wine, and a glaſs of it taken thrice a-day, or oftener if neceſſary.

In obſtinate agues the bark will be found much more efficacious when aſſiſted by warm cordials, than if taken alone. This I have had frequently occaſion to obſerve in a country where intermitting fevers

* The bark may be taken, with propriety, in double the proportion that is here mentioned.

fevers were endemical. The bark ſeldom ſucceeded, unleſs aſſiſted by ſnake-root, ginger, canella alba, or ſome other warm aromatics *. When the fits are very frequent and violent, in which caſe the fever often approaches towards an inflammatory nature, it will be ſafer to leave out the aromatics, and to add in their place half an ounce of ſalt of wormwood. But in obſtinate tertians or quartans, in the end of autumn or beginning of winter, warm and cordial medicines are abſolutely neceſſary.

As autumnal and winter agues generally prove much more obſtinate than thoſe which attack the patient in ſpring or ſummer, it will be neceſſary to continue the uſe of medicines longer in the former than in the latter. A perſon who is ſeized with an intermitting fever in the beginning of winter, ought frequently, if the ſeaſon prove rainy, to take a little of the medicine, although the diſeaſe be cured, to prevent a relapſe, till the return of the warm ſeaſon. He ought likewiſe to take care not to be much abroad in wet weather, eſpecially in cold moiſt eaſterly winds.

When agues are not properly cured, they often degenerate into obſtinate chronical diſeaſes, as the dropſy, jaundice, &c. For this reaſon all poſſible care ſhould be taken to have them radically cured, before the humours be vitiated, and the conſtitution ſpoiled.

Though nothing is more rational than the method of treating intermitting fevers, yet, by ſome ſtrange infatuation, more charms and whimſical remedies are daily uſed for removing this than any other diſeaſe. There is hardly an old woman who is not poſſeſſed of a noſtrum for ſtopping an ague; and there is reaſon to fear, that many, by truſting

* The Author obſerves, in a ſubſequent edition, in ſuch caſes, half an ounce of Virginia ſnake-root, and a quarter of an ounce of ginger, may be mixed up with two ounces of the bark.

to ſuch people, loſe their lives. Thoſe in diſtreſs eagerly graſp at any thing that promiſes ſudden relief; but the ſhorteſt way is not always the ſafeſt in the treatment of diſeaſes. The only method to obtain a ſafe and laſting cure, is gradually to aſſiſt nature in removing the cauſe of the diſeaſe.

Some people try bold, or rather fool-hardy experiments, to cure agues, as drinking ſtrong liquors, jumping into a river, &c. Theſe may ſometimes have the deſired effect, but muſt always be attended with danger. When there is any degree of inflammation, or the leaſt tendency to it, ſuch experiments may prove fatal. The only perſon whom I remember to have ſeen die in an intermitting fever, evidently killed himſelf by drinking ſtrong liquor, which ſome perſon had perſuaded him would prove an infallible remedy.

Many out-of-the-way things are extolled for the cure of intermitting fevers, as ſpiders' cobwebs, ſnuffings of candles, &c. Though theſe may ſometimes ſucceed, yet their very naſtineſs is ſufficient to ſet them aſide, eſpecially when cleanly medicines will anſwer the purpoſe better. The only medicine that can be depended upon, for thoroughly curing an intermitting fever, is the Jeſuits bark. It may always be uſed with ſafety: And I can honeſtly declare, that in all my practice I never knew it fail, when properly applied, and duly perſiſted in.

Where agues are endemical, even children are often afflicted with that diſeaſe. Such patients are very difficult to cure, as they can ſeldom be brought to take the bark, or any other diſagreeable medicine. One method of rendering this medicine more palatable is, to make it into a mixture with diſtilled waters and ſyrup, and afterward to give it an agreeable ſharpneſs with the elixir or ſpirit of vitriol. This both improves the medicine, and takes

takes off the nauſeous taſte. The bark may be adminiſtered to children in form of clyſter, when they will not take it by the mouth. Wine-whey is a very proper drink for a child in an ague; to half an Engliſh pint of which may be put a tea-ſpoonful of the ſpirit of hartſhorn. Exerciſe is likewiſe of conſiderable ſervice; and when the diſeaſe proves obſtinate, the child ought, if poſſible, to be removed to a warm dry air. His food ought to be nouriſhing, and he ſhould ſometimes have a little generous wine.

We have been the more full upon this diſeaſe, becauſe it is very common, and becauſe few patients in an ague apply to phyſicians unleſs in extremities. There are, however, many caſes in which the diſeaſe is very irregular, being complicated with other diſeaſes, or attended with ſymptoms which are both very dangerous and difficult to underſtand. All theſe we have purpoſely paſſed over, as they would only bewilder the generality of readers. When the diſeaſe is very irregular, or the ſymptoms dangerous, the patient ought immediately to apply to a phyſician, and ſtrictly to follow his advice.

To prevent agues, people muſt avoid their cauſes. Theſe have been already pointed out in the beginning of this ſection; we ſhall therefore only add one preventive medicine, which may be of uſe to ſuch as are obliged to live in low marſhy countries, or who are liable to frequent attacks of this diſeaſe.

Take an ounce of the beſt Jeſuits bark, half an ounce of Virginian ſnake-root, and half an ounce of orange-peel; bruiſe them all together, and infuſe for five or ſix days in a bottle of brandy, Holland gin, or any good ſpirit; afterwards pour off the clear liquor, and take a wine-glaſs of it twice or thrice a-day. This indeed is recommending a dram; but the bitter in a great meaſure takes off

the ill effects of the ſpirit. Thoſe who do not chuſe it in brandy may infuſe it in wine; and ſuch as can bring themſelves to chew the bark, will find that method ſucceed very well. Gentian-root, or calamus aromaticus, may alſo be chewed by turns for the ſame purpoſe. All bitters ſeem to be antidotes to agues, eſpecially thoſe that are warm and aſtringent.

OF AN ACUTE CONTINUAL FEVER.

This fever is denominated acute, ardent, or inflammatory. It moſt commonly attacks the young, or thoſe about the prime or vigour of life, eſpecially ſuch as live full, abound with blood, and whoſe fibres are ſtrong and elaſtic. It ſeizes people at all ſeaſons of the year; but is moſt frequent in the ſpring and beginning of ſummer.

CAUSES.——An ardent fever may be occaſioned by any thing that overheats the body, as violent exerciſe, ſleeping in the ſun, drinking ſtrong liquors, eating ſpiceries, &c. It may likewiſe be occaſioned by any thing that obſtructs the perſpiration, as lying on the damp ground, drinking cold liquor when the body is hot, night-watching, or ſuch like.

SYMPTOMS.—A rigour or chillneſs generally uſhers in this fever, which is ſoon ſucceeded by great heat, a frequent and full pulſe, a pain of the head, dry ſkin, redneſs of the eyes, a florid countenance, pains in the back, loins, &c. To theſe ſucceed difficulty of breathing, ſickneſs, with an inclination to vomit. The patient complains of great thirſt, has no appetite for ſolid food, is reſtleſs, and his tongue generally appears black and rough.

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A delirium, exceſſive reſtleſſneſs, great oppreſſion of the breaſt, with laborious reſpiration, ſtarting of the tendons, hiccup, cold, clammy ſweats, and an involuntary diſcharge of urine, are generally the forerunners of death.

As this diſeaſe is always attended with danger, the beſt medical aſſiſtance ought to be procured as ſoon as poſſible. A phyſician may be of uſe at the beginning, but his ſkill is often of no avail afterwards.

We cannot here omit, once for all, taking notice of the unaccountable conduct of thoſe who have it in their power, at the beginning of a fever, to procure the beſt medical aſſiſtance, yet put it off till things come to an extremity. When the diſeaſe, by delay or wrong treatment, has become incurable, and has exhauſted the ſtrength of the patient, it is in vain to hope for relief from medicine. Phyſicians may indeed aſſiſt Nature; but their attempts muſt ever prove fruitleſs, when ſhe is no longer able to co-operate with their endeavours.

REGIMEN.——From the ſymptoms of this diſeaſe, it is evident, that the blood muſt be thick and viſcous, by which its circulation through the ſmall veſſels is impeded; that the perſpiration, urine, and all the other ſecretions, are in too ſmall quantity; that the veſſels are too rigid, and the heat of the whole body too great: All theſe clearly point out the neceſſity of a regimen, calculated to dilute the blood, allay the exceſſive heat, remove the ſpaſmodic ſtricture of the veſſels, and promote the ſecretions.

Theſe important purpoſes may be greatly promoted by drinking plentifully of diluting liquors, as thin-water-gruel, oat-meal tea, clear whey, barley-water, balm-tea, apple-tea, &c. Theſe ſhould be ſharpened with juice of orange, jelly of currants, raſpberries, and ſuch like: Orange-whey is likewiſe

wife an excellent cooling drink. It is made by boiling a bitter orange, fliced among milk and water, till the curd feparates. If no orange can be had, a lemon, a little cream of tartar, or a few fpoonfuls of vinegar, will have the fame effect. Two or three fpoonfuls of white wine may be occafionally added to the liquor when boiling.

If the patient be coftive, an ounce of tamarinds, with two ounces of ftoned raifins of the fun, and a couple of figs, may be boiled in three Englifh pints of water to a quart. This makes a very pleafant drink, and may be ufed at difcretion. The common pectoral decoction is likewife a very proper drink in this difeafe. It is made by boiling barley, ftoned raifins and figs, of each two ounces, with half an ounce of liquorice-root fliced, in two Englifh quarts of water, till one half be confumed. The barley fhould be boiled fome time before the other ingredients are put in. This, with the addition of two or three drams of purified nitre, or falprunel, will not only be a proper drink, but prove an exceeding good medicine. A tea-cupful of it may be taken every two hours, or oftener, if the patient's heat and thirft be very great.

The above liquors muft all be drank a little warm. They may be ufed in fmaller quantities at the beginning of a fever, but more freely afterwards, in order to affift in carrying off the morbid matter by the different excretions. We have mentioned a variety of liquors, that the patient may have it in his power to chufe that which is moft agreeable, and that, when tired of one, he may have recourfe to another.

The patient's diet muft be very fpare and light. All forts of meats, and even chicken-broths, are to be avoided. He may be allowed groat-gruel, panada, or light bread boiled in water, and afterwards ftrained; to which may be added a few grains

grains of common ſalt, and a little ſugar, which will render it more palatable. He may eat roaſted apples with a little ſugar, toaſted bread with a little currant jelly, boiled prunes, &c.

It will greatly relieve the patient, eſpecially in an hot ſeaſon, to have freſh air frequently let into his chamber. This, however, muſt always be done in ſuch a manner as not to endanger his catching cold.

It is a common practice to load the patient with bed-clothes, under the pretence of making him ſweat, or defending him from the cold. This cuſtom has many ill effects. It increaſes the heat of the body, fatigues the patient, and retards, inſtead of promoting, the perſpiration.

Sitting upright in bed, if the patient be able to bear it, will often have a good effect. It relieves the head, by retarding the motion of the blood to the brain. But this poſture ought never to be continued too long: And if the patient be inclined to ſweat, it will be more ſafe to let him lie ſtill, only raiſing his head with pillows, &c.

Sprinkling the chamber with vinegar, juice of lemon, or vinegar and roſe-water, with a little nitre diſſolved in it, will greatly refreſh the patient. This ought to be done frequently, eſpecially if the weather be hot.

The patient's mouth ſhould be often waſhed with warm water, mixed with honey, and a little vinegar; or a decoction of figs in barley-water, &c. His feet and hands ought likewiſe frequently to be bathed in lukewarm water; eſpecially if the head be affected.

The patient ſhould be kept as quiet and eaſy as poſſible. Company, noiſe, and every thing that diſturbs the mind, is hurtful. Even too much light, or any thing that affects the ſenſes, is to be avoided. His attendants ſhould be as few as poſſible, and

and they ought not to be too often changed. His inclinations ought rather to be ſoothed than contradicted; even the promiſe of what he craves will often ſatisfy him as much as its reality.

MEDICINE.——In this and all other fevers attended with much heat, and a hard full pulſe, bleeding is of the greateſt importance. This operation ought always to be performed as ſoon as the ſymptoms of an inflammatory fever appear. The quantity of blood to be let muſt be in proportion to the ſtrength of the patient, and the violence of the diſeaſe. If after the firſt bleeding the fever ſeem to riſe, and the pulſe feel hard, there will be a neceſſity for repeating it a ſecond, and perhaps a third time, which may be done at a diſtance of twelve, eighteen, or twenty-four hours, as the ſymptoms require. If the pulſe continue ſoft, and the patient be tolerably eaſy after the firſt bleeding, it ought not to be repeated till neceſſary.

The cooling febrifuge draught, recommended in the intermitting fever will likewiſe be very proper, here; only the brandy muſt be left out, and half a dram of purified nitre added in its ſtead.

If the above cannot be conveniently obtained, forty or fifty drops of the dulcified or ſweet ſpirit of nitre may be made into a draught, with an ounce of roſe-water, two ounces of common water, and half an ounce of ſimple ſyrup, or a bit of loaf-ſugar. This draught may be given to the patient every three hours while the fever is violent; afterwards, once in five or ſix hours will be ſufficient.

If the patient be afflicted with reaching, or an inclination to vomit, it will be right to aſſiſt Nature's attempts, by giving him weak camomile tea or lukewarm water to drink.

If the belly be bound, the patient ought daily to receive a clyſter of milk and water, with a little

ſalt,

ſalt, and a ſpoonful of ſweet oil or freſh butter. If this have not the deſired effect, a tea-ſpoonful of magneſia alba, or cream of tartar, may be frequently put into his drink. He may likewiſe eat tamarinds, boiled prunes, roaſted apples, and the like.

If about the tenth, eleventh, or twelfth day, the pulſe become more ſoft, the tongue moiſter, and the urine begin to let fall a reddiſh ſediment, there is reaſon to expect a favourable iſſue to the diſeaſe. But if, inſtead of theſe ſymptoms, the patient's ſpirits grow languid, his pulſe ſink, and his breathing become difficult; with a ſtupor, tremors of the nerves, ſtarting of the tendons, &c. there is reaſon to fear that the conſequences will be fatal. In this caſe bliſtering plaiſters muſt be applied to the head, ankles, inſide of the thighs, &c.; ſynapiſms may likewiſe be laid to his feet, and the patient muſt be ſupported with cordials, as ſtrong wine whey, negus, ſago-gruel, and ſuch like.

A proper regimen is not only neceſſary during the fever, but likewiſe after the patient begins to recover. By neglecting this, many relapſe, or fall into other diſeaſes, and continue valetudinary for life. Though the body be weak after a fever, yet the food for ſome time ought to be rather of eaſy digeſtion than of too nouriſhing a nature. The perſon ſhould take great care not to exceed in any thing. Too much food, drink, ſleep, exercise, company, &c. are carefully to be avoided. The mind ought likewiſe to be kept eaſy, and the perſon ſhould not attempt to purſue ſtudy, or any thing that requires intenſe thinking.

If the digeſtion be bad, or the perſon be troubled at times with feveriſh heats, an infuſion of the Jeſuits bark in cold water will be of uſe. It will ſtrengthen the ſtomach, and help to ſubdue the remains of the fever.

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When the patient's ſtrength is pretty well recovered, he ought to take ſome gentle laxative. An ounce of tamarinds and a dram of ſenna may be boiled for a few minutes in an Engliſh pint of water, and an ounce of manna diſſolved in the decoction; afterwards it may be ſtrained, and a tea-cupful drank every hour till it operate. This doſe may be repeated twice or thrice, five or ſix days intervening betwixt each doſe.

Thoſe who follow laborious employments ought not to return too ſoon to their labour after a fever, but ſhould keep eaſy till their ſtrength and ſpirits be recruited.

OF THE PLEURISY.

The true pleuriſy is an inflammation of that membrane, called *the pleura*, which lines the inſide of the breaſt. It is diſtinguiſhed into the moiſt and the dry. In the former, the patient ſpits freely; but in the latter, little or none at all. There is likewiſe a ſpecies of this diſeaſe, which is called the *ſpurious* or *baſtard pleuriſy*, in which the pain is more external, and chiefly affects the muſcles between the ribs. This diſeaſe abounds among labouring people, eſpecially ſuch as work without doors, and are of a ſanguine conſtitution. It is moſt frequent in the ſpring-ſeaſon.

CAUSES.——The pleuriſy is occaſioned by whatever obſtructs the perſpiration; as cold northerly winds, drinking cold liquors when the body is hot, ſleeping without doors on the damp ground; wet clothes, plunging the body into cold water, or expoſing it to the cold air when covered with ſweat,

ſweat, &c. It may likewiſe be occaſioned by drinking ſtrong liquors; by the ſtoppage of uſual evacuations, as old ulcers, iſſues, ſweating of the feet or hands, &c.; the ſudden ſtriking in of any eruption, as the itch, the meaſles, or the ſmall-pox. Thoſe who have been accuſtomed to bleed at a certain ſeaſon of the year, are apt, if they neglect it, to be ſeized with a pleuriſy. Keeping the body too warm by means of fire, clothes, &c. renders it more liable to this diſeaſe. A pleuriſy may likewiſe be occaſioned by violent exerciſe, as running, wreſtling, leaping, or by ſupporting great weights, eſpecially on the breaſt. The very make of the body ſometimes prediſpoſes perſons to this diſeaſe, as a narrow cheſt, a ſtraitneſs of the arteries of the pleura, &c.

SYMPTOMS.——This, like moſt other fevers *, begins with chillneſs and ſhivering, which are followed by heat, thirſt, and reſtleſſneſs. To theſe ſucceed a violent pricking pain in one of the ſides amongſt the ribs. Sometimes the pain extends towards the back-bone, ſometimes towards the fore-part of the breaſt, and at other times towards the ſhoulder-blades. The pain is generally moſt violent when the patient draws in his breath.

The pulſe in this diſeaſe is generally hard, the urine high coloured; and if blood be let, it is covered with a tough cruſt, or buffy coat. The patient's ſpittle is at firſt thin, but afterwards it becomes groſſer, and is often ſtreaked with blood.

REGIMEN.——Nature endeavours to carry off this diſeaſe either by a critical diſcharge of blood from the noſe, &c. or by expectoration, ſweat, looſe ſtools, thick urine, &c. When the violence of the fever is not broken by theſe, or other evacuations,

* This diſeaſe is not claſſed by our Author with much propriety among the fevers ſtrictly ſo called, as being attended with a primary local affection.

cuations, it often ends in an abſceſs or ſuppuration; to which enſues an ulcer, hectic fever, and death.

The violence of this diſeaſe may generally be checked by leſſening the force of the circulation, relaxing the veſſels, diluting the humours, and promoting expectoration, &c.

For theſe purpoſes, the diet, as in the former diſeaſe, muſt be cool, ſlender, and diluting. The patient muſt avoid food that is viſcid, hard of digeſtion, or that affords much nouriſhment, as fleſh, butter, cheeſe, eggs, milk, and alſo every thing that is of a heating nature. His drink muſt be ſweet whey, or decoctions and infuſions of the pectoral and balſamic vegetables.

Take a table ſpoonful of linſeed, a quarter of an ounce of liquorice-root ſliced, and half an ounce of the leaves of coltsfoot. Put theſe ingredients in a cloſe veſſel, pour on them a quart of boiling water, and let them ſtand near a fire for eight or ten hours; afterwards ſtrain off the liquor; of which the patient may take a cupful frequently for his ordinary drink.

Barley-water, ſweetened with honey, or ſharpened with the jelly of currants, is likewiſe a very proper drink in this diſeaſe. It is made by boiling an ounce of pearl-barley in three Engliſh pints of water to two, which muſt afterwards be ſtrained. The decoction of figs, raiſins, and barley, &c. recommended in the continual fever, is here likewiſe very proper. Theſe and other diluting liquors are not to be drank in large quantities at a time, but the patient ought, in a manner, to keep continually ſipping them, ſo as to render his mouth and throat always moiſt. All his food and drink muſt be taken a little warm.

The patient ſhould be kept quiet, cool, and every way

way eaſy, as directed under the foregoing diſeaſe. His feet and hands ought daily to be bathed in warm water; and he may ſometimes ſit up in bed for a ſhort ſpace, in order to relieve his head.

MEDICINE.——Almoſt every perſon knows, when a fever is attended with a violent pain of the ſide, and a quick, hard pulſe, that bleeding is neceſſary. When theſe ſymptoms appear, the ſooner this operation is performed the better; and the quantity at firſt muſt be pretty large, provided the patient be able to bear it. A large quantity of blood let at once, in the beginning of a pleuriſy, has a much greater effect than ſeveral repeated ſmall bleedings. An adult perſon may loſe ten or twelve ounces of blood as ſoon as it is certainly known that he is ſeized with a pleuriſy *. For a younger perſon, or one of a delicate conſtitution, the quantity muſt be leſs.

If after the firſt bleeding, the ſtitch, with the other violent ſymptoms, ſhould continue, it will be neceſſary, at the diſtance of twelve or eighteen hours, to let eight or nine ounces more. If the ſymptoms do not then abate, and the blood ſhow a ſtrong buffy coat, a third or even a fourth bleeding may be requiſite. If the pain of the ſide abate, the pulſe become ſofter, or the patient begin to ſpit freely of a brown or reddiſh colour, bleeding ought not to be repeated. This operation is ſeldom neceſſary after the third or fourth day of the fever †, and ought not then to be performed without the advice of a phyſician, unleſs in the moſt urgent circumſtances.

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* In an adult male of tolerable vigour, and when the attack is any way ſevere, the firſt bleeding ſhould not be under ſixteen or twenty ounces.

† This direction muſt be received with much caution. The propriety of bleeding is to be judged of, not from the duration of the diſeaſe, but from the degree of pain; and whenever this is violent, is clearly indicated.

The blood may be many ways attenuated without letting it off. There are likewiſe many things that may be done to eaſe the pain of the ſide, beſides bleeding. Thus, after the firſt or ſecond bleeding, emollient fomentations may be applied to the part affected. Theſe may be made by boiling a handful of the flowers of elder, camomile, and common mallows, or any other ſoft vegetables, in a proper quantity of water. The herbs may be either put into a bag, and applied warm to the ſide, or flannels may be dipped in the decoction, afterwards wrung out, and applied to the part affected, with as much warmth as the patient can eaſily bear. As the cloths grow cool, they muſt be changed, and great care taken that the patient do not catch cold. An ox's bladder may be half filled with warm milk and water, and applied to the ſide, if the above method of fomenting be found inconvenient. Fomentations not only eaſe the pain, but, by relaxing the veſſels, prevent the ſtagnation of the blood and other humours.

The ſide may likewiſe be frequently rubbed with a little of the following liniment. Take two table-ſpoonfuls of the oil of ſweet almonds, olives, or any other ſweet oil, and two tea-ſpoonfuls of ſpirit of hartſhorn: Shake them well together, and rub about a tea-ſpoonful upon the ſide, with a warm hand, three or four times a-day.

Leaves of various plants might likewiſe be applied to the patient's ſide with advantage. We have often ſeen, and even felt, the benefit of young cabbage-leaves applied warm to the ſide in a pleuriſy. Theſe not only relax, but likewiſe draw off a little moiſture, and may prevent the neceſſity of bliſtering-plaiſters; which, however, when other things fail, muſt be applied.

If the ſtitch continues after repeated bleedings, fomentations, &c. a bliſtering-plaiſter muſt be laid upon

upon the part affected, and ſuffered to remain for twelve or fourteen hours. This will procure a diſcharge from the ſide, and by that means aſſiſt in removing the cauſe of the diſeaſe *.

To prevent a ſtrangury when the bliſtering-plaſter is on, the patient may drink freely of the following emulſion. Take an ounce of ſweet almonds blanched, and beat them well in a mortar, with an equal quantity of fine ſugar. Then diſſolve half an ounce of gum-arabic in an Engliſh quart of barley-water, warm. Let it ſtand till it cool, and afterwards pour it by little and little upon the almonds and ſugar, continually rubbing them till the liquor becomes uniformly white or milky. Afterwards ſtrain it, and let the patient uſe it for ordinary drink. A quart-bottle, at leaſt, may be drank daily.

If the patient be coſtive, a clyſter of warm water, or of barley-water, in which a handful of mallows, or any other emollient vegetable, has been boiled, may be daily adminiſtered. This will not only empty the bowels, but have the effect of a warm fomentation applied to the inferior viſcera, which will help to make a derivation from the breaſt.

The expectoration, or ſpitting, may be promoted by ſharp, oily, and mucilaginous medicines. For this purpoſe, an ounce of the oxymel or vinegar of ſquills may be added to ſix ounces of the pectoral decoction, and two table-ſpoonfuls of it taken every two hours.

Should the ſquill diſagree with the ſtomach, two ounces of the oil of ſweet almonds, or oil of olives,

* Local bleeding may frequently be uſed with advantage in this diſeaſe; in thoſe caſes eſpecially, where, from the previous loſs of blood, or the debilitated ſtate of the patient, farther general bleeding may ſeem dangerous, while, at the ſame time, the pain continues ſevere. This may be done either by means of a number of leeches applied to the part, or by ſcarifying and cupping.

and two ounces of the ſyrup of violets, may be mixed with as much ſugar-candy powdered as will make an electuary of the conſiſtence of honey. The patient may take a little of this frequently, when the cough is troubleſome.

Should oily medicines happen to prove nauſeous, which is ſometimes the caſe, two drams of gum ammoniac may be diſſolved in half an Engliſh pint of barley-water, in the following manner: The gum muſt be well rubbed in a mortar, and the water gradually poured upon it till it be quite diſſolved. Three or four ounces of ſimple penny-royal water may be added to the above quantity, and two table-ſpoonfuls of it taken three or four times a-day.

If the patient does not perſpire, but has a burning heat upon his ſkin, and paſſes very little water, ſome ſmall doſes of purified nitre and camphire will be of uſe. Two drams of the former may be rubbed, with five or ſix grains of the latter, in a mortar, and the whole divided into ſix doſes, one of which may be taken every five or ſix hours, in a little of the patient's ordinary drink.

But the beſt medicine, which ſome indeed reckon almoſt a ſpecific in the pleuriſy, is the decoction of the ſeneka rattle-ſnake root. Two ounces of the root groſsly powdered muſt be boiled in two Engliſh pints and a half of water, till one half the water be conſumed. It muſt not be boiled quickly, but gradually ſimmered over a ſlow fire. After bleeding and other evacuations have been premiſed, the patient may take two, three, or four table-ſpoonfuls of this decoction, according as his ſtomach will bear it, three or four times a-day. If it ſhould occaſion vomiting, two or three ounces of ſimple cinnamon-water may be mixed with the quantity of decoction above mentioned; or it may be taken in ſmaller doſes. As this medicine at

once

once promotes perſpiration, urine, and keeps the belly eaſy, it bids the faireſt of any thing yet known to anſwer all the intentions of cure in a pleuriſy, or any other inflammation of the breaſt *.

No one will imagine, that theſe medicines are all to be uſed at the ſame time. We have mentioned different things, on purpoſe that people may have it in their power to chuſe; and likewiſe, that when one thing cannot be obtained, they may make uſe of another. Different medicines are no doubt neceſſary in the different periods of a diſorder; and where one fails of ſucceſs, or diſagrees with the patient, it will be proper to try another.

What is called the criſis, or height of the fever, is ſometimes attended with very alarming ſymptoms, as difficulty of breathing, an irregular pulſe, convulſive motions, &c. Theſe are apt to fright the attendants, and induce them to do improper things, as bleeding the patient, giving him ſtrong ſtimulating medicines, or the like. But they are only the ſtruggles of nature to overcome the diſeaſe, in which ſhe ought to be aſſiſted by plenty of diluting drink, which is then peculiarly neceſſary. If the patient's ſtrength, however, be much exhauſted by the diſeaſe, it may be neceſſary at this time to ſupport him with frequent ſmall draughts of wine-whey, or the like.

When the pain and fever are gone, it will be proper, after the patient has gathered ſufficient ſtrength, to give him ſome gentle purges, as thoſe directed under the acute continual fever. He ought likewiſe to uſe a light diet of eaſy digeſtion, and his drink ſhould be butter-milk, whey, and other things of a cleanſing nature.

* Whatever reputation this, as well as many other medicines, may have formerly poſſeſſed in the cure of this complaint, the preſent practice pays but little regard to any of them; and truſts the cure entirely to repeated bleeding and bliſtering.

OF THE BASTARD PLEURISY.

That ſpecies of pleuriſy which is called the *baſtard* or *ſpurious*, generally goes off by keeping warm for a few days, drinking plenty of diluting liquors, and obſerving a low regimen.

It is known by a dry cough, a quick pulſe, and a difficulty of lying on the affected ſide; which laſt does not always happen in the true pleuriſy. Sometimes indeed this diſeaſe proves obſtinate, and requires bleeding, with cupping, and ſcarifications of the affected ſide. Theſe, together with the uſe of nitrous, and other cooling medicines, ſeldom fail to effect a cure *.

OF THE PARAPHRENITIS.

The *paraphrenitis*, or inflammation of the diaphragm, is ſo nearly connected with the pleuriſy, and reſembles it ſo much in the manner of treatment, that it is ſcarcely neceſſary to conſider it as a ſeparate diſeaſe.

It is attended with a very acute fever, and an extreme pain of the part affected, which is generally augmented by coughing, ſneezing, drawing in the breath, taking food, going to ſtool, making water, &c. Hence the patient breathes quick, and draws in his bowels to prevent the motion of the diaphragm, is reſtleſs, anxious, has a dry cough, a hiccup, and often a delirium. A convulſive laugh,

* Bliſtering, as well as vomiting, is frequently uſeful in the cure of this diſeaſe.

laugh, or rather a kind of involuntary grin, is no uncommon ſymptom of this diſeaſe.

Every method muſt be taken to prevent a ſuppuration, as it is impoſſible to ſave the patient's life when that happens. The regimen and medicine are in all reſpects the ſame as in the pleuriſy. We ſhall only add, that in this diſeaſe emollient clyſters are peculiarly uſeful, as they relax the bowels, and by that means draw the humours from the part affected.

OF A PERIPNEUMONY, OR INFLAMMATION OF THE LUNGS.

As this diſeaſe affects an organ which is abſolutely neceſſary to life, it muſt always be attended with danger. Thoſe who abound with thick blood, whoſe fibres are tenſe and rigid, who feed upon groſs aliment, and drink ſtrong viſcid liquors, are moſt liable to this diſeaſe. It is generally fatal to perſons of a flat breaſt, or narrow cheſt, and to ſuch as are afflicted with an aſthma, eſpecially in the decline of life. Sometimes the inflammation reaches to one lobe of the lungs only, at other times the whole of that organ is affected; in which caſe the diſeaſe can hardly fail to prove fatal.

When the diſeaſe proceeds from a viſcid pituitous matter, obſtructing the veſſels of the lungs, it is called a *ſpurious*, or *baſtard peripneumony*. When it ariſes from a thin acrid defluction on the lungs, it is denominated a *catarrhal peripneumony*, &c.

CAUSES.——An inflammation of the lungs is ſometimes a primary diſeaſe, and ſometimes it ſucceeds to other diſeaſes, as a quinſy, a pleuriſy, &c.

It ariſes from the ſame cauſes as a pleuriſy, viz. an obſtructed perſpiration from cold, wet clothes, &c.; or from an increaſed circulation of the blood by violent exerciſe, the uſe of ſpiceries, ardent ſpirits, and ſuch like. The pleuriſy and peripneumony are often complicated; in which caſe the diſeaſe is called *pleuro-peripneumony* *.

SYMPTOMS.——Moſt of the ſymptoms of a pleuriſy likewiſe attend an inflammation of the lungs; only in the latter the pulſe is more ſoft, and the pain leſs acute; but the difficulty of breathing, and oppreſſion of the breaſt, are generally greater.

REGIMEN.——As the regimen and medicine are in all reſpects the ſame in the true peripneumony as in the pleuriſy, we ſhall not here repeat them, but refer the reader to the treatment of that diſeaſe. It may not, however, be improper to add, that the aliment ought to be more ſlender and thin in this than in any other inflammatory diſeaſe. The learned Dr Arbuthnot aſſerts, that even common whey is ſufficient to ſupport the patient, and that decoctions of barley, and infuſions of fennel-roots in warm water with milk, are the moſt proper both for drink and nouriſhment. He likewiſe recommends the ſteam of warm water taken in by the breath, which ſerves as a kind of internal fomentation, and helps to attenuate the impacted humours. If the patient has looſe ſtools, but is not weakened by them, they are not to be ſtopped, but rather promoted by the uſe of emollient clyſters.

It

* In this, as well as in many other inſtances, medical writers have amuſed themſelves by making *diſtinctions* without *differences*. Inflammations of the cheſt, they divided into pneumonia, pleuritis, paraphrenitis, &c. All theſe, however, as they are never, or ſeldom, to be diſtinguiſhed from one another by the ſymptoms, and as they require preciſely the ſame method of treatment, are now conſidered as one and the ſame diſeaſe, under the general title of Pneumonia.

It has already been obſerved, that the *ſpurious* or *baſtard* peripneumony is occaſioned by a viſcid pituitous matter obſtructing the veſſels of the lungs. It commonly attacks the old, infirm, and phlegmatic, in winter or wet ſeaſons.

The patient at the beginning is cold and hot by turns, has a ſmall quick pulſe, feels a ſenſe of weight upon his breaſt, breathes with difficulty, and ſometimes complains of a pain and giddineſs of his head. His urine is commonly pale, and his colour very little changed.

The diet in this, as well as in the true peripneumony, muſt be very ſlender, as weak broths ſharpened with the juice of orange or lemon, &c. His drink may be thin water-gruel ſweetened with honey, or a decoction of fennel root, liquorice, and roots of quick graſs. An ounce of each of theſe may be boiled in three Engliſh pints of water to a quart, and ſharpened with a little currant jelly, or the like.

Bleeding and purging are generally proper at the beginning of this diſeaſe; but if the patient's ſpittle be pretty thick, or well concocted, neither of them are neceſſary. It will be ſufficient to aſſiſt the expectoration by ſome of the ſoft balſamic medicines, recommended for that purpoſe in the pleuriſy. Bliſtering-plaſters have generally a good effect, and ought to be applied pretty early. They may either be applied to the neck or ankles, or both if neceſſary.

If the patient does not ſpit, he muſt be bled, if his ſtrength will permit, and have a gentle purge adminiſtered. Afterwards his belly may be kept open by clyſters, and the expectoration promoted, by taking every four hours two table-ſpoonfuls of the ſolution of gum-ammoniac, recommended in the pleuriſy.

When an inflammation of the breaſt does not

yield to bleeding, bliſtering, and the other means mentioned above, it commonly ends in a ſuppuration, which is more or leſs dangerous, according to the part where it is ſituate. When this happens in the pleura, it ſometimes breaks outwardly, and the matter is diſcharged by the wound.

Sometimes the ſuppuration happens within the ſubſtance or body of the lungs; in which caſe the matter may be diſcharged by expectoration; but if the matter floats in the cavity of the breaſt, between the pleura and the lungs, it can only be diſcharged by an inciſion made betwixt the ribs.

If the patient's ſtrength does not return after the inflammation is to all appearance removed; if his pulſe continues quick, though ſoft, his breathing difficult and oppreſſed; if he has cold ſhiverings at times, his cheeks fluſhed, his lips dry; and if he complains of thirſt, and want of appetite; there is reaſon to fear that a ſuppuration is formed, and that a phthiſis or conſumption of the lungs will enſue. We ſhall therefore proceed to conſider the proper treatment of that diſeaſe.

OF CONSUMPTIONS.

A CONSUMPTION is a waſting or decay of the whole body, from an ulcer, tubercles, or concretion of the lungs; from an empyema, a nervous atrophy, &c.

Dr Arbuthnot obſerves, that in his time conſumptions made up above one tenth part of the bills of mortality about London. There is reaſon to believe they have rather increaſed ſince that time; and we know for certain, that they are not leſs

leſs fatal in ſeveral other towns in England than in London.

Young perſons betwixt the age of fifteen and thirty, of a ſlender make, long neck, high ſhoulders, and flat breaſts, are moſt liable to this diſeaſe.

Conſumptions prevail more in England than in any other part of the world, owing perhaps to the great uſe of animal food, and ſtrong liquors, the general application to ſedentary employments, and the great quantity of pit-coal which is there burnt; to which we may add, the perpetual changes in the atmoſphere, or variableneſs of the weather.

CAUSES.——It has already been obſerved, that inflammations of the breaſt often end in an impoſthume: Conſequently whatever prediſpoſes to thoſe diſeaſes muſt likewiſe be conſidered as a cauſe of conſumptions.

Many other diſeaſes, by vitiating the humours, may likewiſe occaſion conſumptions; as the ſcurvy, the ſcrophula or king's-evil, the venereal diſeaſe, the aſthma, ſmall-pox, meaſles, &c.

As this diſeaſe is ſeldom cured, it will be neceſſary to point out its cauſes more particularly, in order that people may be the better enabled to avoid it. Theſe are:

—— Want of exerciſe. Hence this diſeaſe is ſo common amongſt the inhabitants of great towns, who follow ſedentary employments, and likewiſe amongſt the rich, who are not under the neceſſity of labouring for their bread.

—— Confined or unwholeſome air. Air which ſtagnates, or is impregnated with the fumes of metals or minerals, is extremely hurtful to the lungs, and often corrodes the tender veſſels of that neceſſary organ.

—— Violent paſſions, or affections of the mind; as grief, diſappointment, anxiety, or cloſe application to the ſtudy of abſtruſe arts or ſciences, &c.

—— Exceſſive

—— Exceſſive evacuations; as ſweating, diarrhœas, diabetes, exceſſive venery, the fluor albus, an over-diſcharge of the menſtrual flux, giving ſuck too long, &c.

—— The ſudden ſtoppage of cuſtomary evacuations; as the bleeding piles, ſweating of the feet, bleeding of the noſe, the menſes, iſſues, ulcers, or eruptions of any kind.

—— Changing ſuddenly from a hot to a very cold climate, or whatever greatly leſſens the perſpiration.

—— Frequent and exceſſive debaucheries. Late watching, and drinking of ſtrong liquors, which generally go together, can hardly fail to deſtroy the lungs. Hence the *bon companion* generally falls a ſacrifice to this diſeaſe.

—— Infection. Conſumptions are often caught by ſleeping with the diſeaſed; for which reaſon this ſhould be carefully avoided. It cannot be of great benefit to the ſick, and muſt hurt thoſe in health.

—— Occupations in life. Thoſe artificers who ſit much, and are conſtantly leaning forward, or preſſing upon their ſtomachs and breaſts, as cutlers, tailors, ſhoemakers, &c. often die of conſumptions.

—— Cold. More conſumptive patients date their diſorders from wet feet, damp beds, night-air, wet clothes, and ſuch like, than from all other cauſes.

Sharp, ſaline, and aromatic aliments, which heat and inflame the blood, are likewiſe frequently the cauſe of conſumptions.

We ſhall only add, that this diſeaſe is often owing to an hereditary taint; in which caſe it is generally incurable.

SYMPTOMS.——This diſeaſe generally begins with a dry cough, which often continues for ſome months.

months. If a diſpoſition to vomit after eating be excited by it, there is great reaſon to fear an approaching conſumption. The patient complains of a more than uſual degree of heat, a pain and oppreſſion of the breaſt, eſpecially after motion; his ſpittle is of a ſaltiſh taſte, and ſometimes mixed with blood. He is apt to be ſad; his appetite is bad, and his thirſt great. There is generally a ſenſe of weight on the breaſt, with a quick, ſoft, ſmall pulſe; though ſometimes the pulſe is pretty full, and rather hard. Theſe are the common ſymptoms of a beginning conſumption.

Afterwards the patient begins to ſpit a greeniſh, white, or bloody matter. His body is extenuated by the hectic fever and colliquative ſweats, which mutually ſucceed one another, viz. the one towards the night, and the other in the morning. A looſeneſs, and exceſſive diſcharge of urine, are often troubleſome ſymptoms at this time, and greatly weaken the patient. There is a burning heat in the palms of the hands, and the face generally fluſhes after eating; the fingers become remarkably ſmall, the nails are bent inwards, and the hairs fall off.

At laſt the ſwelling of the feet and legs, the total loſs of ſtrength, the ſinking of the eyes, the difficulty of ſwallowing, and the coldneſs of the extremities, ſhow the immediate approach of death, which, however, the patient ſeldom believes to be ſo near. Such is the uſual progreſs of this fatal diſeaſe, which, if not early checked, commonly ſets all medicine at defiance.

REGIMEN.——On the firſt appearance of this diſeaſe, if the patient lives in a large town, or any place where the air is confined, he ought immediately to quit it, and to make choice of a ſituation in the country, where the air is pure, dry, and free.

Here

Here he muſt not remain inactive, but take every day as much exerciſe as he can bear.

The beſt method of taking exerciſe is to ride on horſeback, as this gives the body a great deal of motion without much fatigue. Such as cannot bear this kind of exerciſe, muſt make uſe of a machine. A long journey, as it amuſes the mind by a continual change of objects, is greatly preferable to riding the ſame ground over and over. Care, however, muſt be taken to avoid catching cold from wet clothes, damp-beds, or ſuch like. At any rate, the patient muſt ride; his life depends upon it; and it is almoſt an infallible remedy, if begun in time, and duly perſiſted in.

It is pity thoſe who attend the ſick ſeldom recommend riding in this diſeaſe, till the patient is either unable to bear it, or the malady is become incurable. Patients are always apt to trifle with every thing that is in their own power. They cannot ſee how one of the common actions of life ſhould prove a remedy in an obſtinate diſeaſe, and therefore they reject it, while they greedily hunt after relief from medicine, merely becauſe it is unknown.

Thoſe who have ſtrength and courage to undertake a pretty long voyage, may expect great advantage from it. This has frequently cured a conſumption after the patient was thought to be in the laſt ſtage of that diſeaſe, and where medicine had proved ineffectual. It is reaſonable from hence to conclude, that if a voyage were undertaken in due time, it would ſeldom fail to perform a cure.

Such as try this method of cure ought to carry as much freſh proviſions along with them as will ſerve for the whole time they are at ſea. As milk is not to be obtained in this ſituation, they ought to live upon fruits and the broth of chickens, or other young animals which can be kept alive on board.

board. It is ſcarce neceſſary to add, that ſuch voyages ſhould be undertaken, if poſſible, in the mildeſt ſeaſon, and that they ought to be towards a warmer climate.

Thoſe who have not courage for a long voyage, may travel into a more ſouthern climate, as the ſouth of France, Spain, or Portugal; and if they find the air of theſe countries agree with them, they ſhould continue there, at leaſt till their health be confirmed.

Next to proper air and exerciſe, we would recommend a due attention to the diet. The patient muſt eat nothing that is either heating or hard of digeſtion, and his drink muſt be of a ſoft and cooling nature. All the diet muſt be calculated to leſſen the acrimony of the humours, and abate the rapid motion of the blood. For this purpoſe the patient muſt keep ſtrictly to the uſe of vegetables and milk. Milk alone is of more value in this diſeaſe than the whole *materia medica*.

Aſſes milk is generally reckoned preferable to any other; but it cannot always be obtained; beſides, it is generally taken as a medicine; whereas, to produce any conſiderable effects, it ought in a manner to make the principal part of the patient's food. It is hardly to be expected, that a gill or two of aſſes milk, drank in the ſpace of twenty-four hours, ſhould be able to produce any conſiderable change in the humours in a ſhort time; but when people do not perceive its effects ſoon, they loſe hope, and ſo leave it off. Hence it comes to paſs, that this medicine, however valuable, very ſeldom performs a cure. The reaſon is obvious; it is commonly uſed too late, is taken in too ſmall quantities, and is not duly perſiſted in.

I have known very extraordinary effects from aſſes milk in obſtinate coughs, which threatened a conſumption of the lungs; and do verily believe, if uſed

uſed at this period, that it would ſeldom fail; but if it be delayed till an ulcer is formed, which is generally the caſe, how can it be expected to ſucceed?

Aſſes milk ought to be drank, if poſſible, in its natural warmth, and in the quantity of half an Engliſh pint at a time. Inſtead of taking this quantity night and morning only, the patient ought to take it four times, or at leaſt thrice a-day, and to eat a little light bread along with it, ſo as to make it a kind of meal.

If aſſes milk ſhould happen to purge the patient, it may be mixed with old conſerve of roſes, which is itſelf a valuable medicine in this diſeaſe. If that cannot be obtained, the powder of crabs claws may be uſed in its ſtead. Aſſes milk is uſually ordered to be drank warm in bed; but as it generally throws the patient into a ſweat when taken in this way, it would be more proper to give it after he riſes.

Some extraordinary cures in conſumptive caſes have been performed by women's milk. Could this be obtained in ſufficient quantity, we would recommend it preferably to any other. It is better if the patient can ſuck it from the breaſt, than to drink it afterwards. I knew a man who was reduced to ſuch a degree of weakneſs in a conſumption, as not to be able to turn himſelf in bed. His wife was at that time giving ſuck, and the child happening to die, he ſucked her breaſts, not with a view to reap any advantage from the milk, but to make her eaſy. Finding himſelf, however, greatly benefited by it, he continued to ſuck her till he perfectly recovered, and is at preſent a ſtrong and healthy man.

Some prefer butter-milk to any other, and it certainly is a very valuable medicine, if the ſtomach

mach be able to bear it. It does not agree with every perſon at firſt; and is therefore often laid aſide without a ſufficient trial. It ſhould at firſt be taken ſparingly, and the quantity gradually increaſed, until it comes to be almoſt the ſole food. I never knew it ſucceed, unleſs where the patient almoſt entirely lived upon it.

Cows milk is moſt readily obtained of any; and though it be not ſo eaſily digeſted as that of aſſes or mares, it may be rendered lighter by adding it to an equal quantity of barley-water, or allowing it to ſtand for ſome hours, and afterwards taking off the cream. If it ſhould notwithſtanding lie heavy on the ſtomach, a table ſpoonful of rum or brandy, and a bit of loaf-ſugar, may be put into half an Engliſh pint.

It is not to be wondered, that milk ſhould, for ſome time, diſagree with a ſtomach that has not been accuſtomed to digeſt any thing but fleſh and ſtrong liquors, which is the caſe of a number of thoſe who fall into conſumptions. We do not, however, adviſe thoſe who have been accuſtomed to animal food and ſtrong liquors, to leave them off all at once. This might be dangerous. It will be neceſſary for ſuch to eat a little once a-day of the fleſh of ſome young animal, or rather to uſe the broth made of chickens, veal, lamb, or ſuch like. They ought likewiſe to drink a little wine made into negus, or diluted with twice or thrice its quantity of water, and to make it gradually weaker till they can leave it off altogether.

Theſe muſt be uſed only as preparatives to a diet conſiſting ſolely of milk and vegetables, which the ſooner the patient can be brought to bear, the better. Rice and milk, or barley and milk, boiled, with a little ſugar, is very proper food. Ripe fruits, roaſted, baked, or boiled, are likewiſe proper,

per, as goose or currant-berry tarts, apples roasted, or boiled in milk, &c. The jellies, conserves, and preserves, &c. of ripe subacid fruits, ought to be eat plentifully, as the jelly of currants, conserve of roses, preserved plumbs, cherries, &c.

Wholesome air, proper exercise, and a diet consisting solely of these and other vegetables, with milk, is the only course that can be depended on in a beginning consumption. If the patient has strength and sufficient resolution to persist in this course, he will seldom be disappointed of a cure.

In a populous town in England, where consumptions are very common, I have frequently seen consumptive patients, who had been sent to the country with orders to ride, and live upon milk and vegetables, return in a few months quite plump, and free of any complaint. This indeed was not always the case, especially when the disease was hereditary, or far advanced; but it was the only method in which success was to be expected; where it failed, I never knew medicine succeed.

If the patient's strength and spirits flag, he must be supported by rich broths and jellies, &c. Some recommend shell-fish in this disorder, and we are inclined to think with reason; they are very nourishing, at the same time that they cool the blood, and blunt the acrimony of the humours. All the food and drink ought to be taken in small quantities, lest an overcharge of fresh chyle should oppress the lungs, and too much accelerate the circulation of the blood.

The patient's mind ought to be kept as easy and chearful as possible. Consumptions are often occasioned by a melancholy cast of mind; for which reason, music, chearful company, and every thing that inspires mirth, are highly beneficial. The

patient

patient ought ſeldom to be left alone, as brooding over his calamities is ſure to render them worſe.

MEDICINE.——Though we know no medicine that will cure a confirmed conſumption; yet the following things may be of ſervice, in abating ſome of the more violent ſymptoms.

In the firſt ſtage of a conſumption, the cough may ſometimes be appeaſed by bleeding; and expectoration promoted by the following medicines. Take freſh ſquills, gum-ammoniac, and powdered cardamum-ſeeds, of each a quarter of an ounce; beat them together in a mortar, and if the maſs proves too hard for pills, a little of any kind of ſyrup may be added to it. This may be formed into pills of a moderate ſize, and four or five of them taken twice or thrice a-day, according as the patient's ſtomach will bear them.

The lac ammoniacum, or milk of gum-ammoniac, as it is called, is likewiſe a proper medicine in this ſtage of the diſeaſe. It may be prepared and uſed as directed before.

A ſyrup made of equal parts of lemon-juice, fine honey, and ſugar-candy, may likewiſe be uſed. Four ounces of each of theſe may be ſimmered together in a ſauce-pan, over a ſlow fire, and a table-ſpoonful of it taken at any time when the cough is troubleſome *.

It is common, in this ſtage of the diſeaſe, to load the patient's ſtomach with balſamic medicines, and at the ſame time to drench him with decoctions, infuſions, &c. of the pectoral vegetables. The former of theſe, inſtead of removing the cauſe of the diſeaſe, tend rather to increaſe it, by heating the blood, while the latter pall the appetite, relax the ſolids, and prove every way hurt-

* Ten or twelve drops of laudanum may be added occaſionally, to each ſpoonful of the mixture.

ful to the patient. Whatever is uſed for removing the cough, beſides riding, and other proper regimen, ought to be medicines of a ſharp and cleanſing nature.

For the patient's drink, we would recommend infuſions of the bitter plants, as ground-ivy, the leſſer centaury, camomile-flowers, or water-trefoil. Theſe infuſions may be drank at pleaſure. They ſtrengthen the ſtomach, promote digeſtion, and at the ſame time anſwer all the purpoſes of dilution, and quench thirſt much better than things that are luſcious or ſweet.

But if the patient ſpits blood, he ought to uſe the following decoction for his ordinary drink. Take an ounce of comfrey-root, of liquorice, and marſh-mallow roots, each half an ounce. Boil them in two Engliſh quarts of water to one. If a tea-ſpoonful of the acid elixir of vitriol be added to this decoction, when cold, it will be a very proper medicine. A tea-cupful of it may be taken at pleaſure.

There are many other mucilaginous plants and ſeeds, of a healing and agglutinating nature, from which decoctions or infuſions may be prepared, with the ſame intention as the orches, the quince-ſeed, coltsfoot, linſeed, ſarſaparilla, &c. It is not neceſſary to mention the different forms in which theſe may be uſed. Simple infuſion or boiling, is all that is neceſſary, and the doſe may be at diſcretion.

The conſerve of roſes is here peculiarly proper. It may either be put into the decoction above preſcribed, or eat by itſelf. No benefit is to be expected from triſling doſes of this medicine. I never knew it of any ſervice, unleſs where three or four ounces at leaſt were uſed daily. In this way, I have ſeen it produce very extraordinary effects, and would recommend it wherever

wherever there is a diſcharge of blood from the lungs *.

When the ſpitting up of groſs matter, oppreſſion of the breaſt, and the hectic ſymptoms, ſhow that an impoſthume is formed in the lungs, we would recommend the Jeſuits bark, that being the only drug which has any chance to counteract the tendency which the humours then have to putrefaction.

An ounce of the bark in powder, may be divided into eighteen or twenty doſes, of which one may be taken every three hours through the day, in a little ſyrup, or a cup of the patient's ordinary drink.

If the bark ſhould happen to purge, it may be made into an electuary, with the conſerve of roſes, thus: Take old conſerve of roſes, a quarter of a pound; Jeſuits bark in powder, an ounce; ſyrup of orange or lemon, as much as will make it of the conſiſtence of honey. This quantity will ſerve the patient four or five days, and may be repeated as there is occaſion.

Such as cannot take the bark in ſubſtance, may infuſe it in cold water. This ſeems to be the beſt medium for extracting the virtues of that drug. Half an ounce of bark in powder may be infuſed for twenty-four hours, in half an Engliſh pint of water. Afterwards, let it be paſſed through a fine ſtrainer, and an ordinary tea-cupful of it taken three or four times a-day †.

* That the conſerve of roſes, as well as the elixir of vitriol, have been uſeful as gentle aſtringents in ſome caſes of ſpitting of blood, we can readily believe: but, we confeſs, we have not much faith in the virtues of theſe *vulnerary and agglutinating* decoctions and infuſions.

† Notwithſtanding the warm recommendation that is here given of the bark, we are of opinion, that it can ſeldom be adminiſtered with propriety in this diſeaſe. It is too generally accompanied

We would not recommend the bark while there are any ſymptoms of an inflammation of the breaſt; but when it is certainly known, that matter is collecting there, it is the only medicine upon which any ſtreſs can be laid. Few patients have reſolution enough to give the bark a fair trial, at this period of the diſeaſe, otherwiſe we have reaſon to believe, that great benefit might be reaped from it.

When it is evident that there is an impoſthume in the breaſt, and the matter can neither be ſpit up, nor carried off by abſorption, the patient muſt endeavour to make it break inwardly, by drawing in the ſteams of warm water or vinegar with his breath, coughing, laughing, or bawling aloud, &c. When it happens to burſt within the lungs, the matter may be diſcharged by the mouth. Sometimes indeed the burſting of the vomica occaſions immediate death, by ſuffocating the patient. When the quantity of matter is great, and the patient's ſtrength exhauſted, this is apt to happen. At any rate, the patient is ready to fall into a ſwoon, and ſhould have volatile ſpirits or ſalts held to his noſe.

If the matter diſcharged be thick, and the cough and breathing become eaſier, there may be ſome hopes of a cure. The diet at this time ought to be light, but reſtorative, as ſmall chicken-broths, ſago-gruel, rice-milk, &c. the drink, butter-milk, or whey, ſweetened with honey. This is likewiſe a proper time for uſing the Jeſuits bark, which may be taken as before directed.

If the vomica or impoſthume ſhould diſcharge itſelf

companied with an inflammatory diſpoſition, to admit of ſuch a powerful tonic as the bark. Where this diſpoſition, however, is either altogether awanting, or at leaſt only preſent in a leſs degree, and eſpecially where the diſeaſe aſſumes ſomewhat of a more regular periodical appearance in its attacks, the bark may perhaps be uſed with advantage.

itſelf into the cavity of the breaſt, betwixt the pleura and the lungs, there is no way of getting the matter out, but by an inciſion, as has already been obſerved. As this operation muſt always be performed by a ſurgeon, it is not neceſſary for us to deſcribe it. We ſhall only obſerve, that it is not ſo dreadful as people are apt to imagine, and that it is the only chance the patient has for his life. It is indeed a pity that this operation, like moſt others, is generally delayed till too late. When the whole maſs of humours is tainted, the body waſted, and the ſtrength decayed, it is in vain to attempt to ſave the patient's life by an operation.

A NERVOUS CONSUMPTION, is a waſting or decay of the whole body, without any conſiderable degree of fever, cough, or difficulty of breathing. It is attended with indigeſtion, weakneſs, want of appetite, &c.

Thoſe who are of a fretful temper, who indulge in ſpiritous liquors, or who breathe an unwholeſome air, are moſt liable to this diſeaſe.

We would chiefly recommend, for the cure of a nervous conſumption, a light and nouriſhing diet, enough of exerciſe in a free open air, and the uſe of ſuch bitters as brace and ſtrengthen the ſtomach; as the Jeſuits bark, gentian-root, camomile, &c. Theſe may be infuſed in wine, and a glaſs of it drank frequently.

It will greatly aſſiſt the digeſtion, and promote the cure of this diſeaſe, to take twice a-day, twenty or thirty drops of the elexir of vitriol in a glaſs of wine or water.

The chalybeate wine is likewiſe an excellent medicine in this caſe. It ſtrengthens the ſolids, and powerfully aſſiſts nature in the preparation of good blood. It is made by putting three ounces

of the filings of ſteel or iron into a bottle of Rheniſh wine, and allowing it to digeſt for three weeks, frequently ſhaking the bottle. Afterwards the wine muſt be filtered for uſe. A table-ſpoonful of it may be taken twice or thrice a-day.

Agreeable amuſements, chearful company, and riding about, are however preferable to all medicines in this diſeaſe. For this reaſon, when the patient can afford it, we would recommend a long journey of pleaſure, as the moſt likely means to reſtore his health.

What is called a *ſymptomatic conſumption*, cannot be cured without firſt removing the diſeaſe by which it is occaſioned. Thus, when a conſumption proceeds from the ſcrophula, or king's-evil, from the ſcurvy, the aſthma, the venereal diſeaſe, &c. a due attention muſt be paid to the malady from whence it ariſes, and the regimen and medicine directed accordingly.

When exceſſive evacuations of any kind occaſion a conſumption, they muſt not only be reſtrained, but the patient's ſtrength muſt be reſtored, by gentle exerciſe, nouriſhing diet, and generous cordials, &c. Young and delicate mothers often fall into conſumptions, by giving ſuck too long. As ſoon as they perceive their ſtrength and appetite begin to fail, they ought immediately to wean the child, or give it another nurſe, otherwiſe they cannot expect a cure.

Before quitting this ſubject, we would earneſtly recommend it to all who wiſh to avoid conſumptions, to take as much exerciſe without doors as they can, to avoid unwholeſome air, and to ſtudy ſobriety. Conſumptions owe their preſent increaſe not a little to the faſhionable mode of ſpending every evening over a punch-bowl, or a bottle of wine. Theſe liquors not only ſpoil the appetite, and

and hurt the digeſtion, but heat and inflame the blood, and ſet the whole conſtitution on fire.

OF THE SLOW OR NERVOUS FEVER.

Nervous fevers have increaſed greatly of late years in this iſland, owing doubtleſs to the increaſe of luxury and ſedentary employments; as this diſeaſe commonly attacks perſons of a weak relaxed habit, who neglect exerciſe, eat little ſolid food, ſtudy hard, or indulge in ſpiritous liquors.

CAUSES.——Nervous fevers are occaſioned by whatever depreſſes the ſpirits, or impoveriſhes the blood; as grief, fear, and anxiety, want of ſleep, intenſe thought; living on poor watery diet, as unripe fruits, cucumbers, melons, muſhrooms, &c. They are likewiſe occaſioned by damp, confined, or unwholeſome air. Hence they are very common in rainy ſeaſons, and prove moſt fatal to thoſe who live in dirty, low houſes, crouded ſtreets, hoſpitals, jails, or ſuch like places.

Perſons whoſe conſtitutions have been broken, by exceſſive venery, frequent ſalivations, too free an uſe of purgative medicines, or the like, are very liable to this diſeaſe.

Keeping on wet clothes, ſleeping in the ſun, lying on the damp ground, exceſſive fatigue, and whatever obſtructs the perſpiration, or cauſes a ſpaſmodic ſtricture of the ſolids, may likewiſe occaſion nervous fevers. We ſhall only add, frequent and great irregularities in eating and drinking. Too great abſtinence as well as exceſs is hurtful. Nothing tends ſo much to preſerve the humours in a ſound ſtate, as a regular diet; nor can any

thing contribute more to occaſion fevers of the worſt kind, than its contrary.

SYMPTOMS.——Low ſpirits, want of appetite, weakneſs, wearineſs after motion, watchfulneſs, deep ſighing, and dejection of mind, are generally the forerunners of this diſeaſe. Theſe are ſucceeded by a quick low pulſe, a dry tongue, without any conſiderable thirſt, chillneſs and flushing in turns, &c.

After ſome time, the patient complains of a giddineſs and pain of his head, has a nauſea, with reachings and vomiting; his pulſe is quick, and ſometimes intermitting; his urine pale, reſembling dead ſmall beer, and his breathing is difficult, with oppreſſion of the breaſt, and ſlight alienations of mind.

If towards the ninth, tenth, or twelfth day, the tongue becomes more moiſt, with a plentiful ſpitting, a gentle diarrhœa, or a moiſture upon the ſkin; or if a ſuppuration happen in one or both ears, or large puſtules break out about the lips and noſe, there is reaſon to hope for a favourable criſis.

But, if there be an exceſſive looſeneſs, or waſting ſweats, with frequent fainting fits; if the tongue, when put out, tremble exceſſively, and the extremities feel cold, with a fluttering or ſlow creeping pulſe; if there be a ſtarting of the tendons, an almoſt total loſs of ſight and hearing, and an involuntary diſcharge by ſtool and urine, there is great reaſon to fear that death is approaching.

REGIMEN.——It is highly neceſſary in this diſeaſe to keep the patient eaſy and quiet. The leaſt motion will fatigue him, and will be apt to occaſion wearineſs, and even faintings. His mind likewiſe ought not only to be kept eaſy, but ſoothed and comforted with the hopes of a ſpeedy recovery.

recovery. Nothing is more hurtful in low fevers of this kind, than preſenting to the patient's mind gloomy or frightful ideas. Theſe often occaſion nervous fevers; and it is not to be doubted but they will likewiſe increaſe the danger.

The patient muſt not be kept too low. His ſtrength and ſpirits ought to be ſupported by nouriſhing diet, and generous cordials. For this purpoſe his gruels, panadas, or whatever food he takes, muſt be ſtrengthened with wine according as the ſymptoms may require. Pretty ſtrong wine-whey, or ſmall negus, ſharpened with the juice of orange or lemon, will be proper for his drink.

Wine in this diſeaſe, if it could be obtained genuine, would be almoſt the only medicine that we ſhould need. Good wine poſſeſſes all the virtues of the cordial medicines, while it is free from many of their bad qualities. I ſay good wine; for however common that article of luxury is now become, it is rarely to be obtained genuine, eſpecially by the poor, or ſuch as purchaſe it in ſmall quantities.

I have ſeen a patient in a low nervous fever, whoſe pulſe could hardly be felt, with a conſtant delirium, coldneſs of the extremities, and almoſt every other mortal ſymptom, recover by uſing, in whey, gruel, and negus, a bottle of ſtrong wine every day. Good wine is not only the moſt proper cordial, but ſeems alſo to be an excellent antiſpaſmodic medicine; and conſequently it muſt be highly proper, in all diſeaſes ariſing from a poor vapid ſtate of the blood, and too great a ſtricture of the ſolids.

Muſtard-whey is a very proper drink in this fever. It is made by tying, in a linen rag, a tableſpoonful of common muſtard bruiſed, and boiling it a little in half an Engliſh pint of water, with an

an equal quantity of milk. Two or three ſpoonfuls of wine may be added to it when boiling, to make the curd ſeparate more perfectly, and to render the whey more cordial. A tea-cupful of this may be given frequently for the patient's ordinary drink.

In a word, the great aim in this diſeaſe is to ſupport the patient's ſpirits, by giving him frequently ſmall quantities of the above, or other drinks of a warm and cordial nature. He is not, however, to be over-heated, either with liquor or clothes; and his food ought to be light, and given in ſmall quantities.

MEDICINE.——Where a nauſea, load, and ſickneſs at ſtomach, prevail at the beginning of the fever, it will be neceſſary to give the patient a gentle vomit. Fifteen or twenty grains of ipecacoanha will generally anſwer this purpoſe very well. This may be repeated any time before the third or fourth day, if the above ſymptoms continue. Vomits not only clean the ſtomach, but, by the general ſhock which they give, promote the perſpiration, and have many other excellent effects in ſlow fevers, where there are no ſigns of inflammation, and nature wants rouſing.

Such as dare not venture upon a vomit, may clean the bowels by a ſmall doſe of Turkey rhubarb, or an infuſion of ſenna and manna.

In all fevers, the great point is to regulate the ſymptoms, ſo as to prevent their going to either extreme. Thus, in fevers of the inflammatory kind, where the force of the circulation is too great, or the blood denſe, and the fibres too rigid, bleeding and other evacuations are neceſſary. But where nature flags, where the blood is vapid and poor, and the ſolids weak and relaxed, there the lancet is to be avoided. Hence bleeding is never

never to be permitted in nervous fevers, unleſs there be evident ſigns of an inflammation, which very ſeldom happens.

It is the more neceſſary to caution people againſt bleeding in this diſeaſe, as there is generally at the beginning an univerſal ſtricture upon the veſſels, which even to the patient himſelf often gives the idea of a plethora, or too great a quantity of blood. I have known ſome of the profeſſion deceived by their own feelings in this reſpect, ſo far as to inſiſt upon being bled, when it was evident that the operation was improper.

I remember to have attended an apothecary in a nervous fever, who, at the beginning, was ſo fully perſuaded of the exiſtence of a plethora, and the neceſſity of bleeding, that when I objected to it, he told me he was ſo certain of the neceſſity of that operation, from his own feelings, that if it was not performed, he could not live; and that if no body elſe would bleed him, he was determined to do it himſelf. He was accordingly bled, but was ſoon convinced of his error. The blood ſhewed no ſigns of inflammation, and he was ſo remarkably worſe after the operation, that he narrowly eſcaped with his life. His pulſe and ſpirits ſunk exceedingly, ſo that he could hardly be ſupported by a bottle of ſtrong wine in the day, beſides other cordial medicines.

Though bleeding be improper in this diſeaſe, yet bliſtering is highly neceſſary. Bliſtering-plaſters may be applied at all times of the fever, with great advantage; we would, however, adviſe people not to make too free with them at the beginning, leſt there ſhould be more occaſion for them afterwards. If the patient be delirious, he ought to be bliſtered on the neck; and it will be the ſafeſt courſe, while the fever continues, as

ſoon

ſoon as the diſcharge occaſioned by one plaſter abates, to apply another ſome where elſe, and by that means keep up a continual ſucceſſion of them till the patient be out of danger.

I have been more ſenſible of the advantage of bliſtering in this diſeaſe, than of any other medicine. It not only promotes the circulation by ſtimulating the ſolids, but likewiſe occaſions a continual diſcharge, which may in ſome meaſure ſupply the want of critical evacuations, which ſeldom happen in this kind of fever.

If the patient be coſtive through the courſe of the diſeaſe, it will be neceſſary to procure a ſtool, by giving him every other day a clyſter of milk and water, with a little ſugar, to which may be added a ſpoonful of common ſalt, if it be neceſſary.

Should a violent looſeneſs come on, it may be checked, by giving the patient frequently a ſmall quantity of Venice treacle, or any thing that will promote the perſpiration.

Though bliſtering and cordial liquors are the only medicines to be depended on in this kind of fever, yet, for thoſe who may chuſe to uſe them, we ſhall mention one or two of the forms of medicine which are commonly preſcribed in it.

Thus, when the patient is low, ten grains of Virginian ſnake-root, and the ſame quantity of contrayerva-root, with five grains of Ruſſian caſtor, all in fine powder, may be made into a bolus, with a little of the cordial confection, or ſyrup of ſaffron. One of theſe may be taken every four or five hours.

The following powder may be uſed for the ſame intention. Take wild Valerian root in powder one ſcruple, ſaffron and caſtor each four grains. Mix theſe by rubbing them together in a mortar, and

and give one in a cup of wine-whey, three or four times a-day *.

In deſperate caſes, where the hiccup and ſtarting of the tendons have already come on, we have ſometimes ſeen extraordinary effects from large doſes of muſk frequently exhibited. This is doubtleſs a great antiſpaſmodic, and may be given to the quantity of a ſcruple three or four times a-day. Sometimes it may be proper to add to the muſk a few grains of camphor, and ſalt of hartſhorn, as theſe tend to promote perſpiration and urine. Thus, fifteen grains of muſk, with three grains of camphor, and ſix grains of ſalt of hartſhorn, may be made into a doſe, and given as above.

If the fever ſhould happen to intermit, which it frequently does towards the decline, or if the patient's ſtrength ſhould be waſted with colliquative ſweats, it will be neceſſary to give him an infuſion of the Jeſuits bark, with ſnake-root, in wine or brandy.

Half an ounce of the bark, with a dram of Virginian ſnake-root, half a dram of ſaffron, and half an ounce of orange-peel, all groſsly powdered, may be infuſed in half an Engliſh pint of brandy for three or four days. Afterwards ſtrain it, and give the patient two tea-ſpoonfuls in a glaſs of water, or ſmall wine, three or four times a day.

Such as do not chuſe ſpirits may infuſe the above ingredients in a bottle of Liſbon wine, and take a glaſs of it frequently; this will reſtore the ſtrength, prevent

* The preſent practice truſts the cure of this diſeaſe almoſt entirely to bark and wine. Theſe are adminiſtered in quantities proportioned to the debility of the patient, and his capability of receiving them. With theſe too, opiates are frequently conjoined, with a view both to their anodyne and ſtimulating effects. The patient ſhould likewiſe be kept cool, by admitting a free circulation of air in his apartment, and now and then waſhing his hands and face, and even his whole body, with a little cold water and vinegar.

prevent a relapſe, and help to carry off the remains of the fever.

It will likewiſe be proper at this time to interpoſe now and then a gentle doſe of rhubarb, or ſome other mild opening medicine, taking care at the ſame time to ſupport the patient's ſtrength with chicken-broth, jellies, and ſuch like.

OF THE MALIGNANT, PUTRID, OR SPOTTED FEVER.

This may be called the *peſtilential fever* of Europe, as in many of its ſymptoms it bears a great reſemblance to that dreadful diſeaſe.

Perſons of a lax habit, a melancholy diſpoſition, and thoſe whoſe vigour has been waſted by long faſting, watching, hard labour, exceſſive venery, or frequent ſalivations, &c. are moſt liable to this diſeaſe.

CAUSES.——This fever is occaſioned by an unwholeſome, putrid, or ſtagnating air. Hence it prevails in jails, hoſpitals, and infirmaries, eſpecially where ſuch places are greatly crowded, and cleanlineſs is neglected.

A cloſe conſtitution of the air, with long rainy or foggy weather, likewiſe occaſions putrid fevers. Hence they often ſucceed great inundations in low and marſhy countries, eſpecially when theſe are preceded or followed by a hot and ſultry ſeaſon.

Living too much upon animal food, without a proper mixture of vegetables, or eating fiſh or fleſh that has been kept too long, are likewiſe apt to occaſion this kind of fever. Hence ſailors on long voyages, and the inhabitants of beſieged cities, are very often viſited with putrid fevers.

Corn

Corn that has been greatly damaged by rainy ſeaſons, or long keeping, and water that has become putrid by ſtagnation, will likewiſe occaſion putrid fevers. The exceſſive uſe of alkaline ſalts will alſo have this effect.

Dead carcaſes tainting the air, eſpecially in hot ſeaſons, are very apt to occaſion putrid fevers. Hence this kind of fever often prevails in camps, and ſuch countries as are the ſcenes of war and bloodſhed. This ſhews the neceſſity of removing church-yards, ſlaughter-houſes, &c. a proper diſtance from the great towns.

Want of cleanlineſs is a very general cauſe of putrid fevers. Hence they prevail amongſt the poor inhabitants of large towns, who breathe a confined unwholeſome air, neglect cleanlineſs, and are forced to live upon ſpoiled or unwholeſome proviſions, &c. Such mechanics as carry on dirty employments, and are conſtantly confined within doors, are likewiſe very liable to putrid fevers.

We ſhall only add, that all putrid, malignant, or ſpotted fevers, are very infectious; and are therefore often communicated in this way. For which reaſon, all perſons ought to keep at a diſtance from ſuch as are affected with thoſe diſeaſes, unleſs thoſe whoſe attendance is abſolutely neceſſary.

SYMPTOMS.——The malignant fever is generally preceded by a remarkable weakneſs, or loſs of ſtrength, without any apparent cauſe. This is ſometimes ſo great, that the patient can ſcarce walk, or even ſit upright, without being in danger of fainting away. His mind too is greatly dejected; he ſighs, and is full of dreadful apprehenſions.

There is a nauſea, and ſometimes vomiting of bile; a violent pain of the head, with a ſtrong pulſation or throbbing of the temporal arteries; the eyes often appear red and inflamed, with a pain

pain at the bottom of the orbit; there is a noiſe in the ears, the breathing is laborious, and often interrupted with a ſigh: the patient complains of pain about the region of the ſtomach, and in his back and loins; his tongue is at firſt white, but afterwards it appears black and chapped; and his teeth are covered with a black cruſt. He ſometimes paſſes worms both upwards and downwards *, is affected with tremors, or ſhaking, and often becomes delirious.

If blood be let, it appears diſſolved, or with a very ſmall degree of cohcſion, and ſoon becomes putrid; the ſtools ſmell extremely fœtid, and are ſometimes of a greeniſh, black, or reddiſh caſt. Spots of a pale, purple, dun, or black colour, often appear upon the ſkin, and ſometimes violent hæmorrhages, or diſcharges of blood from the mouth, eyes, noſe, &c. happen.

Putrid fevers may be diſtinguiſhed from the inflammatory, by the ſmallneſs of the pulſe, the dejection of mind, the diſſolved ſtate of the blood, the petechiæ, or purple ſpots, and the putrid ſmell of the excrements. They may likewiſe be diſtinguiſhed from the low or nervous fever, by the heat and thirſt being greater, the urine of a higher colour, and the other ſymptoms more violent.

It ſometimes, however, happens, that the inflammatory, nervous, and putrid ſymptoms, are ſo blended together, as to render it very difficult to determine to which claſs the fever belongs. In this caſe, the greateſt caution and ſkill are requiſite: And all endeavours muſt be uſed to relieve the moſt urgent ſymptoms.

Inflammatory and nervous fevers are often converted

* Though this may have happened accidentally in ſome caſes, yet as being by no means a common occurrence, and at any rate not neceſſarily connected with this diſeaſe, it cannot with any propriety be enumerated among the ſymptoms.

verted into malignant and putrid, by too hot a regimen, or improper medicines.

The period of putrid fevers is extremely uncertain; ſometimes they terminate betwixt the ſeventh and fourteenth day, and at other times they are prolonged for five or ſix weeks. Their duration depends greatly upon the conſtitution of the patient, and the manner of treating the diſeaſe.

The moſt favourable ſymptoms are, after the fourth or fifth day, a gentle looſeneſs, with a warm, mild ſweat. Theſe, when continued for a conſiderable time, often carry off the fever, and ſhould never be imprudently ſtopped. Small miliary puſtules appearing between the petechiæ, or purple ſpots, are likewiſe favourable, as alſo hot ſcabby eruptions about the mouth and noſe. It is a good ſign when the pulſe riſes upon the uſe of wine, or other cordials, and the nervous ſymptoms abate; deafneſs coming on towards the decline of the fever, is likewiſe a favourable ſymptom; and ſo are abſceſſes in the groin, or parotid glands.

Amongſt the unfavourable ſymptoms may be reckoned an exceſſive looſeneſs, with a hard ſwelled belly. Large black or livid blotches breaking out upon the ſkin, are a proof of the putrid diſſolution of the blood, and ſhew the danger to be very great. Aphthæ in the mouth, and cold clammy ſweats, are unfavourable ſigns, as alſo blindneſs, change of the voice, a wild ſtaring of the eyes, difficulty of ſwallowing, an inability to put out the tongue, and a conſtant inclination to uncover the breaſt. When the ſweat and ſaliva are tinged with blood, and the urine is black, or depoſits a black ſooty ſediment, the patient is in great danger. Starting of the tendons, and fœtid, ichorous, involuntary ſtools, attended with coldneſs of the extremities, are generally the forerunners of death.

REGIMEN.——In the management of this diſeaſe, we are to endeavour, as far as poſſible, to counteract the putrid tendency of the humours; to ſupport the patient's ſtrength and ſpirits; and to aſſiſt nature in expelling the morbific matter, by gently promoting perſpiration and the other evacuations.

It has been obſerved, that putrid fevers are often occaſioned by unwholeſome air, and of courſe they muſt be aggravated by it. Care muſt therefore be taken to prevent the air from ſtagnating in the patient's chamber, to keep it cool, and renew it frequently, by opening the doors or windows of ſome adjacent apartment. The breath and perſpiration of perſons in perfect health ſoon render the air of a ſmall apartment noxious; but this will ſooner happen from the perſpiration and breath of a perſon whoſe whole maſs of humours are in a putrid ſtate. Theſe fevers are often ſo heightened by the ſame infected air being breathed over and over, that the patient is in a manner ſuffocated by his own atmoſphere.

Beſides the frequent admiſſion of freſh air, we would recommend the uſe of vinegar, verjuice, juice of lemon, Seville orange, or any kind of vegetable acid that can be moſt readily obtained. Theſe ought frequently to be ſprinkled upon the floor, the bed, and every part of the room. They may alſo be evaporated with an hot iron, or by boiling, &c. The freſh ſkins of lemons or oranges ought likewiſe to be laid in different parts of the room, and they ſhould be frequently held to the patient's noſe. The uſe of acids in this manner would not only prove very refreſhing to the patient, but would tend greatly to prevent the infection from ſpreading among thoſe who attend him. Strong ſmelled herbs, as rue, tanſy, roſemary, wormwood, &c. may likewiſe be laid in different

ferent parts of the houſe, and ſmelled to by thoſe who go near the patient.

The patient muſt not only be kept cool, but likewiſe quiet and eaſy. The leaſt noiſe will affect his head, and the ſmalleſt fatigue will be apt to make him faint away.

Nothing is of ſo great importance in this diſeaſe, as the liberal uſe of acids. Theſe are to be mixed with all the patient's food as well as drink. Orange, lemon, or vinegar-whey, are all very proper, and may be drank in turns, according to the patient's inclination. Theſe may be rendered cordial by the addition of wine in ſuch quantity as the patient's ſtrength ſeems to require. When he is very low, he may drink negus, with only one half water, and ſharpened with the juice of orange or lemon. In ſome caſes a glaſs of clear wine may now and then be allowed. The moſt proper wine is Rheniſh; but if the belly be open, red Port or Claret is to be preferred.

When the belly is bound, a tea-ſpoonful of the cream of tartar may be put into a cup of the patient's drink, as there is occaſion; or he may eat a few tamarinds, which will both quench his thirſt and keep his belly eaſy.

If camomile-tea will ſit upon the ſtomach, it is a very proper drink in this diſeaſe. It may be ſharpened by adding to every cup of the tea fifteen or twenty drops of the elixir of vitriol.

The food muſt be light, as panada, groat-gruel, and ſuch like; to theſe a little wine may be added, if the patient be weak and low, and they ought all to be ſharpened with the juice of orange, or the jelly of currants, raſp-berries, &c. The patient ought likewiſe to eat freely of ripe fruits, either baked, roaſted, or raw, as roaſted apples, currant or gooſeberry tarts, preſerved cherries, plumbs, and ſuch like.

The patient muſt never be long without nouriſhment. Taking a little food or drink frequently, not only ſupports the ſpirits, but counteracts the putrid tendency of the humours; for which reaſon he ought conſtantly to be ſipping ſmall quantities of ſome of the acid liquors mentioned above, or any that may be more agreeable to his palate, or more readily obtained.

If the patient be delirious, his feet and hands ought to be frequently fomented with ſtrong infuſions of camomile flowers. This, or an infuſion of the bark, to ſuch as can afford it, cannot fail to have a good effect. Fomentations of this kind not only relieve the head, by relaxing the veſſels in the extremities, but, as their contents are abſorbed, and taken into the blood, they muſt, by their antiſeptic qualities, aſſiſt in preventing the putreſcency of the humours.

If the patient be not able to put his feet and hands into the decoction, cloths dipt in it may be applied to them.

MEDICINE.——If a vomit be taken at the very beginning of this fever, it will hardly fail to have a good effect; but if the fever has gone on for ſome days, and the ſymptoms are violent, vomits muſt not be taken without proper advice *.

Bleeding is ſeldom neceſſary in putrid fevers. If there be ſigns of an inflammation, it may ſometimes

* Emetics are peculiarly proper in this diſeaſe. They ſhould be given at firſt in ſuch doſes as to produce full vomiting, with a view to evacuate the morbid contents of the ſtomach, and afterwards continued in nauſeating doſes, with a view to promote the perſpiration. For theſe purpoſes, the antimonial preparations, and particularly tartariſed antimony, is generally employed. This medicine has alſo another good effect, as it commonly operates as a laxative. Should it fail in this reſpect, however, an emollient clyſter ought to be adminiſtered every night, or every other night at fartheſt. The patient's body, too, ought to be frequently waſhed all over with a ſponge ſoaked in vinegar and water.

times be permitted at the firſt onſet; but the repetition of it often proves fatal *.

Bliſtering-plaſters are never to be uſed unleſs in the greateſt extremities. If the petechiæ or ſpots ſhould ſuddenly diſappear, the patient's pulſe ſink remarkably, and a delirium, with other bad ſymptoms, come on, bliſtering may be permitted. In this caſe, the bliſtering-plaſters are to be applied to the head, and the inſides of the legs or thighs. But as they are ſometimes apt to occaſion a gangrene, we would rather recommend warm poultices or cataplaſms to be applied to the feet, having recourſe to bliſters only in the utmoſt extremities.

A very ridiculous notion has long prevailed, of expelling the poiſonous matter of malignant diſeaſes by ſtrong doſes of cordial or alexipharmic medicines. In conſequence of this notion, the contrayerva-root, the cordial confection, and the mithridate, &c. have been extolled as infallible remedies. There is reaſon to believe that theſe oftener do harm than good. Where cordials are neceſſary, we know none that is ſuperior to good wine; and therefore again recommend it both as the ſafeſt and beſt. Wine, with other acid and antiſeptic medicines, are the only things to be relied on in the cure of malignant fevers.

We have already recommended acids in various forms, and ſhall only add one more, viz. camphorated vinegar. This is made by rubbing a dram of camphor with a ſmall quantity of ſpirits of wine in a mortar, till it becomes ſoft, then adding half an ounce of loaf-ſugar, and rubbing the whole together till perfectly united. Afterwards take an Engliſh pint of warm vinegar, and add it by little and little, ſtill continuing the trituration, till they be uniformly mixed. Let it ſtand to cool, and afterwards ſtrain it. This may be taken in the doſe of a table-ſpoonful or two every two or three hours,

* Bleeding we believe to be always dangerous in this diſeaſe.

according as it agrees with the ſtomach. If it ſhould heat the patient, or occaſion a naufea, it muſt be diſcontinued.

In the moſt dangerous ſpecies of this diſeaſe, when it is attended with purple, livid, or black ſpots, the Jeſuits bark is the only medicine that can be depended upon. I have ſeen it, when joined with acids, almoſt perform wonders, even in caſes where the petechiæ had the moſt threatening aſpect. But, to anſwer this purpoſe, it muſt not only be given in large doſes, but duly perſiſted in.

The beſt method for adminiſtering the bark is certainly in ſubſtance. An ounce of it in powder may be mixed with half an Engliſh pint of water, and the ſame quantity of red wine, and ſharpened with the elixir or ſpirit of vitriol, which will both make it ſit caſier on the ſtomach, and render it more beneficial. Two or three ounces of the ſyrup of lemon may be added, and two table-ſpoonfuls of the mixture taken every two hours, or oftener, if the ſtomach will bear it.

Thoſe who cannot take the bark in ſubſtance, may infuſe it in wine, as recommended in a former diſeaſe.

If there be a violent looſeneſs, the bark muſt be boiled in red wine with a little cinnamon, and ſharpened with the elixir of vitriol as above. Nothing can be more beneficial in this kind of looſeneſs than plenty of acids, and ſuch things as promote the perſpiration.

If the patient be troubled with vomiting, a dram of the ſalt of wormwood, diſſolved in an ounce and half of freſh lemon juice, and made into a draught, with an ounce of ſimple cinnamon-water, or peppermint-water, and a bit of ſugar, may be given to the patient, and repeated as often as it is neceſſary.

If ſwellings of the glands appear, their ſuppuration

tion is to be promoted by the application of poultices, ripening cataplasms, &c.; and as soon as there is any appearance of matter in them, they ought to be laid open, and the poultices continued.

I have known patients in the decline of this fever have large ulcerous sores break out in various parts of the body, of a livid gangrenous appearance, and a most putrid cadaverous smell. These gradually healed, and the patient recovered, by the plentiful use of Jesuits bark mixed in wine, and sharpened with the spirits of vitriol.

All who would avoid this dreadful disease, should study universal cleanliness, and should live regugariy, avoiding the extremes of too high or too low a diet with equal care.

Infection, above all things, is to be avoided. No constitution is proof against it. I have known persons seized with a putrid fever, by only making a single visit to a patient in it; others have caught it by going through a town where it prevailed; and some by attending the funerals of such as died of it.

Any one who is apprehentive of having caught the infection, ought immediately to take a vomit, and to work it off by drinking plentifully of camomile-tea. This may be repeated in a day or two, if the apprehensions still continue, or any unfavourable symptoms appear.

The person ought likewise to take an infusion of the bark and camomile-flowers for his ordinary drink; and before he goes to bed, he may drink an English pint of pretty strong negus, or a few glasses of generous wine. I have been frequently obliged to follow this course, when malignant fevers prevailed, and have likewise recommended it to others with constant success.

People generally fly to bleeding and purging as

antidotes againſt infection; but theſe are ſo far from ſecuring them, that they often increaſe the danger.

Phyſicians, and ſuch as attend the ſick in putrid fevers, ought always to have a piece of ſponge or a handkerchief dipt in vinegar, or juice of lemon, to hold at their noſe. They ought likewiſe to waſh their hands, and, if poſſible, to change their clothes, before they viſit any other patient *.

OF THE MILIARY FEVER.

This fever takes its name from the ſmall puſtules or bladders which appear on the ſkin, reſembling, in

* As this diſeaſe is at once highly infectious and highly dangerous, the utmoſt attention is requiſite, on its firſt appearance, in a large family, to prevent its ſpreading through the whole. For this purpoſe, when a ſervant or domeſtic happens to be ſeized with it, he ought, where it can be done, to be ſent immediately to an hoſpital. Where circumſtances do not permit the removal of the perſon infected, the ſame end may be often obtained by ſending the family, eſpecially if there be a young family, out of the way for a time. Where neither of theſe objects can be conveniently accompliſhed, our attention muſt be directed, *in the firſt place*, to the preventing all unneceſſary communication with the patient, and, *ſecondly*, to the rendering the neceſſary communication as ſafe as poſſible. With a view to the firſt, a ſick nurſe, or ſome elderly perſon accuſtomed to that buſineſs, ſhould remain conſtantly with the patient, and no other attendance but the viſits of the medical gentlemen, or when occaſional aſſiſtance is abſolutely neceſſary, ought to be permitted. In regard to the ſecond, the patient ſhould be placed in the middle of a large airy apartment; the bed-curtains, carpet, and other unneceſſary furniture, ſhould be removed; a conſtant circulation of air, by opening either two windows or a door and window, ought to be kept up: the apartment ought to be frequently ſprinkled with vinegar; the bed and body linen of the patient ought to be frequently changed, and ſhould immediately be given out to the waſhing; and all excrementitious matters ought to be inſtantly removed. Theſe precautions, though ſimple, will, we think, generally be effectual, if care be at the ſame time taken, to avoid all unneceſſary contact with the patient, and all needleſs expoſure to his breath or atmoſphere.

in ſhape and ſize, the ſeeds of millet. The puſtules are either red or white, and ſometimes both are mixed together.

Sometimes the whole body is covered with puſtules; but they are generally more numerous where the ſweat is moſt abundant, as on the breaſt, the back, &c. A gentle ſweat, or moiſture on the ſkin, greatly promotes the eruption; but where the ſkin is dry, the eruption is both more painful and dangerous.

This is ſometimes a primary diſeaſe; but it is much oftener only a ſymptom of ſome other malady, as the ſmall-pox, meaſles, ardent, putrid, or nervous fever, &c. In all theſe caſes it is generally the effect of too hot a regimen or medicines.

The miliary fever chiefly attacks the idle and the phlegmatic, or perſons of a relaxed habit. The young and the aged are more liable to it than thoſe in the vigour and prime of life. It is likewiſe more incident to women than men, eſpecially the delicate and the indolent, who, neglecting exerciſe, keep continually within doors, and live upon weak watery diet. Such females are extremely liable to be ſeized with this diſeaſe in childbed, and often loſe their lives by it.

CAUSES.——The miliary fever is often occaſioned by violent paſſions or affections of the mind; as exceſſive grief, anxiety, thoughtfulneſs, &c. It may likewiſe be occaſioned by exceſſive watching, great evacuations, a weak watery diet, rainy ſeaſons, eating too freely of cold, watery, unripe fruits, as plumbs, cherries, cucumbers, melons, &c. Impure waters, or proviſions which have been ſpoiled by rainy ſeaſons, long keeping, &c. may likewiſe cauſe miliary fevers. They may alſo be occaſioned by the ſtoppage of any cuſtomary evacuation, as iſſues, ſetons, ulcers, the bleeding piles in men, or the menſtrual flux in women, &c.

This

This diſeaſe in childbed-women is ſometimes the effect of great coſtiveneſs during pregnancy; ſometimes it is occaſioned by the exceſſive uſe of green unripe fruits, and other unwholeſome things in which pregnant women are apt to indulge. But its moſt general cauſe is indolence. Such women as indulge an eaſy ſedentary life during pregnancy, and at the ſame time live groſsly and fully, can hardly eſcape this diſeaſe in childbed. Hence it proves extremely fatal to women of faſhion, and likewiſe to thoſe women in manufacturing towns, who, in order to aſſiſt their huſbands, ſit cloſe within doors for almoſt the whole of their time. But among women who are active and laborious, who live in the country, and take enough of exerciſe without doors, this diſeaſe is very little known.

SYMPTOMS.——When this is a primary diſeaſe, it makes its attack, like moſt other eruptive fevers, with a ſlight ſhivering, which is ſucceeded by heat, loſs of ſtrength, faintiſhneſs, ſighing, a low quick pulſe, difficulty of breathing, with great anxiety and oppreſſion of the breaſt. The patient is reſtleſs, and ſometimes delirious; the tongue appears white, and the hands ſhake, with often a burning heat in the palms; and in childbed-women the milk generally goes away, and the other diſcharges ſtop.

The patient feels an itching or pricking pain under the ſkin, after which innumerable ſmall puſtules of a red or white colour begin to appear. Upon this the ſymptoms generally abate, the pulſe becomes more full and ſoft, the ſkin grows moiſter, and the ſweat, as the diſeaſe advances, begins to have a peculiar fœtid ſmell; the great load on the breaſt and oppreſſion of the ſpirits generally go off, and the cuſtomary evacuations gradually return. About the ſixth or ſeventh day from the eruption, the puſtules begin to dry and fall off, which

which occaſions a very diſagreeable itching in the ſkin.

It is impoſſible to aſcertain the exact time when the puſtules will either appear or go off. They generally come out on the third or fourth day, when the eruption is critical; but, when ſymptomatical, they may appear at any time of the diſeaſe.

Sometimes the puſtules appear and vaniſh by turns. When that is the caſe, there is always danger; but when they ſtrike in all of a ſudden, and do not appear again, the danger is very great.

In childbed-women the puſtules are commonly at firſt filled with clear water, afterwards they grow yellowiſh. Sometimes they are interſperſed with puſtules of a red colour. When theſe only appear, the diſeaſe goes by the name of a *raſh*.

REGIMEN.——In all eruptive fevers, of whatever kind, the chief point is to prevent the ſudden ſtriking in of the puſtules. For this purpoſe, the patient muſt be kept in ſuch a temperature, as neither to puſh out the eruption too faſt, nor to cauſe it retreat prematurely. The diet and drink ought therefore to be in a moderate degree nouriſhing and cordial; but neither ſtrong nor heating. The patient's chamber ought neither to be kept too hot nor cold; and he ſhould not be too much covered with clothes. Above all, the mind is to be kept eaſy and chearful. Nothing ſo certainly makes an eruption ſtrike in as fear, or the apprehenſion of danger.

The food muſt be weak chicken-broth, with bread, water-pap, with ſago, and groat-gruel, &c.; to a gill of which may be added a ſpoonful or two of wine, as the patient's ſtrength requires, with a few grains of ſalt and a little ſugar. Good apples, roaſted or boiled, with other ripe fruits of an opening cooling nature, may be eat.

The

The drink muſt be ſuited to the ſtate of the patient's ſtrength and ſpirits. If theſe be pretty high, the drink ought to be weak; as water-gruel, balm-tea, or the following decoction.

Take two ounces of the ſhavings of hartſhorn, and the ſame quantity of ſarſaparilla, boil them in two Engliſh quarts of water. To the ſtrained decoction add a little white ſugar, and let the patient take it for his ordinary drink.

When the patient's ſpirits are low, and the eruption does not riſe ſufficiently, his drink muſt be a little more generous; as wine-whey, or ſmall negus, ſharpened with the juice of orange or lemon, and made ſtronger or weaker as the circumſtances may require.

Sometimes the miliary fever approaches towards a putrid nature, in which caſe the patient's ſtrength muſt be ſupported with generous cordials, joined with acids; and if the degree of putreſcency be great, the Jeſuits bark muſt be adminiſtered. If the head be much affected, the belly muſt be kept open by emollient clyſters.

In the *Commercium Literarium* for the year 1735, we have the hiſtory of an epidemical miliary fever, which raged at Straſburg in the months of November, December, and January; from which we learn the neceſſity of a temperate regimen in this diſeaſe, and likewiſe that phyſicians are not always the firſt who diſcover the proper treatment of diſeaſes: "This fever made terrible havock among men of robuſt conſtitutions, and all medicine proved in vain. They were ſeized in an inſtant with ſhivering, yawning, ſtretching, and pains in the back, ſucceeded by a moſt intenſe heat; at the ſame time there was great loſs of ſtrength and appetite. On the ſeventh or ninth day the military eruptions appeared, or ſpots like flea-bites, with great anxiety, a delirium, reſtleſſneſs,

neſs, and toſſing in bed. Bleeding was fatal. While matters were in this unhappy ſituation, a midwife, of her own accord, gave to a patient, in the height of the diſeaſe, a clyſter of rain-water and butter without ſalt, and for his ordinary drink a quart of ſpring-water, half a pint of generous wine, the juice of one lemon, and ſix ounces of the whiteſt ſugar, gently boiled till a ſcum aroſe; and this with great ſucceſs; for the belly was ſoon looſened, the grievous ſymptoms vaniſhed, and the patient was reſtored to his ſenſes, and ſnatched from the jaws of death." This practice was imitated by others, with the like happy effects.

MEDICINE.——If the food and drink be properly regulated, there will be little occaſion for medicine in this diſeaſe. Should the eruption, however, not riſe, or the ſpirits flag, it will be neceſſary to ſupport the patient with cordials, and to apply bliſters. The moſt proper cordial in this caſe is good wine, which may either be taken in the patient's food or drink; and if there be any ſigns of putreſcency, which frequently happens, the bark and acids may be mixed with wine, as directed in the putrid fever.

Some recommend bliſters through the whole courſe of the diſeaſe; and where nature flags, and the eruption comes and goes, it may be neceſſary to keep up a ſtimulus, by a continual ſucceſſion of ſmall bliſters; but we would not recommend above one at a time. If, however, the pulſe ſhould ſink remarkably, the puſtules ſtrike in, and the head be affected, it will be neceſſary to apply ſeveral bliſtering-plaſters to the moſt ſenſible parts, as the inſide of the legs, thighs, &c.

Bleeding is ſeldom neceſſary in this diſeaſe, and ſometimes it does much hurt, as it weakens the patient, and depreſſes his ſpirits. It is therefore never to be attempted, unleſs by the advice of a phyſician.

phyſician. We mention this, becauſe it has been cuſtomary to treat this diſeaſe in childbed-women by bleeding, and other evacuations, as if it were highly inflammatory. But this practice is generally very unſafe. Patients in this ſituation bear evacuations very ill. And indeed the diſeaſe ſeems often to be more of a putrid than an inflammatory nature.

Though this fever be often occaſioned in childbed-women by too hot a regimen, yet it would be dangerous to leave that off all of a ſudden, and have recourſe to a very cool regimen, and large evacuations. We have reaſon to believe, that ſupporting the patient's ſpirits, and promoting the natural evacuations, is here much ſafer than to have recourſe to artificial ones, as every thing that tends to depreſs the patient's ſpirits conſtantly increaſes the danger.

If this diſeaſe proves tedious, or the recovery ſlow, we would recommend the Jeſuits bark, which may either be taken in ſubſtance, or infuſed in wine or water, as the patient inclines.

The miliary fever, like other eruptive diſeaſes, after it is gone, requires purging, which ſhould not be neglected as ſoon as the patient's ſtrength will permit.

To avoid this diſeaſe, a pure dry air, plenty of exerciſe and wholeſome food, are neceſſary. Pregnant women ſhould guard againſt coſtiveneſs, and take daily as much exerciſe as they can bear, avoiding all green traſhy fruits, and other unwholeſome things; and when in childbed, they ought ſtrictly to obſerve a cool regimen.

OF

OF THE SMALL-POX.

This diſeaſe is ſo general, that very few eſcape it at one time of life or another. It is the moſt contagious malady in theſe parts; and has, for upwards of a thouſand years, proved the ſcourge of Europe.

The ſmall pox generally appear towards the ſpring. They are very frequent in ſummer, leſs ſo in autumn, and leaſt of all in winter. Children are moſt liable to this diſeaſe; and thoſe whoſe food is unwholeſome, who want proper exerciſe, and abound with groſs humours, run the greateſt hazard from it.

The diſeaſe is diſtinguiſhed into the diſtinct and confluent kind; the latter of which is always attended with danger. There are likewiſe other diſtinctions of the ſmall pox; as the lymphatic, the cryſtalline, the bloody, &c.

CAUSES.——The ſmall-pox are commonly caught by infection. Since the diſeaſe was brought into Europe, the infection has never been wholly extinguiſhed; nor have any proper methods, ſo far as we know, ever been taken for that purpoſe; ſo that now it has become in a manner conſtitutional. Children who have over-heated themſelves by running, wreſtling, &c. or adults after a debauch, are very apt to be ſeized with this diſeaſe.

SYMPTOMS.——This diſeaſe is ſo generally known, that a minute deſcription of it is unneceſſary. Children commonly look a little dull, ſeem liſtleſs and drowſy for a few days before the more violent ſymptoms of the ſmall-pox appear. They are likewiſe more inclined to drink than uſual, have little appetite for ſolid food, complain of wearineſs, and, upon taking exerciſe, are apt

to

to ſweat. Theſe ſymptoms are ſucceeded by ſlight fits of cold and heat in turns, which, as the time of the eruption approaches, become more violent, and are accompanied with pains of the head and loins, vomiting, &c. The pulſe is quick, with a great heat of the ſkin, and reſtleſſneſs. When the patient drops aſleep, he wakes in a kind of horror, with a ſudden ſtart, which is a very common ſymptom of the approaching eruption; as are alſo convulſion-fits in very young children.

About the third or fourth day from the time of ſickening, the ſmall pox generally begin to appear; ſometimes indeed they appear ſooner, but that is no advantage. At firſt they very nearly reſemble flea-bites, and are moſt early diſcovered on the face, arms, and breaſt.

The moſt favourable ſymptoms are a ſlow eruption, and an abatement of the fever as ſoon as the puſtules appear. In a mild diſtinct kind of ſmall-pox the puſtules ſeldom appear before the fourth day from the time of ſickening, and they generally keep coming out gradually for ſeveral days after. Puſtules which are diſtinct, with a florid red baſis, and which fill with thick purulent matter, firſt of a whitiſh, and afterwards of a yellowiſh colour, are the beſt.

A livid brown colour of the puſtules is an unfavourable ſymptom; as alſo when they are ſmall and flat, with black ſpecks in the middle. Puſtules which contain a thin watery ichor are very bad. A great number of pox on the face is always a bad ſign, eſpecially if they be confluent, or run into one another.

But the moſt unfavourable ſymptom is the petechiæ, or purple, brown, and black ſpots interſperſed among the puſtules. Theſe are ſigns of a putrid diſſolution of the blood, and ſhow the danger to be very great. Bloody ſtools or urine, with

with a ſwelled belly, are bad ſymptoms; as is alſo a continual ſtrangury. When the urine is very pale, and there is a violent throbbing of the arteries of the neck, it portends a delirium or convulſion-fits. When the face does not ſwell, or falls before the pox come to maturity, it is a very bad ſign. If the face begins to fall about the eleventh or twelfth day, and the hands begin to ſwell, and afterwards the feet, the patient generally does well; but when theſe do not ſucceed one another, there is reaſon to apprehend danger. When the tongue is covered with a brown cruſt, it is an unfavourable ſymptom. Cold ſhivering fits coming on at the height of the diſeaſe, are likewiſe unfavourable. Grinding of the teeth, when it proceeds from an affection of the nervous ſyſtem, is a bad ſign; but ſometimes it is occaſioned by worms, or a diſordered ſtomach.

REGIMEN.——When the firſt ſymptoms of the ſmall-pox appear, people are ready to be alarmed, and often fly to the uſe of medicine, to the great danger of the patient's life. I have known children, to appeaſe the anxiety of their parents, bled, bliſtered, purged, and vomited, during the fever which preceded the eruption of the ſmall-pox, to ſuch a degree, that Nature was not only diſturbed in her operation, but rendered unable to ſupport the puſtules after they were out; ſo that the patient, exhauſted by mere evacuations, ſunk under the diſeaſe.

When convulſions appear, they give a dreadful alarm. Immediately ſome noſtrum is applied, as if this were a primary diſeaſe; whereas it is only a ſymptom, and far from being an unfavourable one, of the approaching eruption. As the fits generally go off before the actual appearance of the ſmall-pox, it is attributed to the medicine, which

by this means acquires a reputation without any merit.

All that is, generally ſpeaking, neceſſary during the eruptive fever, is to keep the patient within doors *, and to allow him to drink freely of ſome weak diluting liquors; as balm-tea, barley-water, clear whey, gruels, &c. He ſhould neither be kept in too warm a room, nor confined to bed; but ſhould ſit up as much as he is able, and ſhould have his feet and legs frequently bathed in luke-warm water. His food, if he takes any, ought to be very light; and he ſhould be as little diſturbed with noiſe and company as poſſible.

Much miſchief is done at this period by confining the patient too ſoon to his bed, and plying him with warm cordials or ſudorific medicines. Every thing that heats and inflames the blood increaſes the fever, and puſhes out the puſtules too faſt. This has numberleſs ill effects. It not only increaſes the number of puſtules, but likewiſe tends to make them run into one another; and when they have been puſhed out with too great violence, they generally fall in before they come to maturity.

The good women, as ſoon as they ſee the ſmall-pox begin to appear, commonly ply their tender charge with cordials, ſaffron and marigold teas, wines, punch, and even brandy itſelf. All theſe are given with a view to throw out the eruption, as they pretend, from the heart. This, like moſt other

* This direction has, we obſerve, very properly been omitted in the laſt edition of this Work. Indeed nothing, we may remark, contributes ſo effectually to moderate the eruptive fever, and conſequently to mitigate this diſeaſe, as a free expoſure of the patient to cold air, and a free indulgence in the uſe of cold drink; while, on the other hand, nothing tends with ſuch certainty to increaſe the eruptive fever, and conſequently to render the ſubſequent diſeaſe violent, as keeping the patient hot, or, in other words, confining him within doors, and giving him warm drink, or any thing heating.

other popular miſtakes, is the abuſe of a very juſt obſervation, *That when there is a moiſture on the ſkin, the pox riſe better, and the patient is eaſier than when it continues dry and parched.* But that is no reaſon for forcing the patient into a ſweat. Sweating never relieves, unleſs where it comes ſpontaneouſly, or is the effect of drinking weak diluting liquors.

The patient ought to have no more covering in bed than is neceſſary to prevent his catching cold; and he ſhould be frequently taken up, if it were only for a few minutes; this will both keep him cool, and prevent too great a flux of blood towards the head.

Children are often ſo peeviſh, that they will not lie a-bed without a nurſe conſtantly by them. This, we have reaſon to believe, has many bad effects. Even the natural heat of the nurſe cannot fail to augment the fever of the child; but if ſhe too proves feveriſh, the danger muſt be increaſed. I have known a nurſe contract a malignant fever by lying in bed with a child the whole time of its being ill of a bad kind of ſmall-pox.

Laying ſeveral children who have the ſmall-pox in the ſame bed, has many ill conſequences. They ought, if poſſible, never to be in the ſame chamber, as the perſpiration, the heat, and the ſmell, &c. all tend to augment the fever, and to heighten the diſeaſe. It is common among the poor to ſee two or three children lying in the ſame bed, with ſuch a load of puſtules, that their very ſkins ſtick together. One can hardly view a ſcene of this kind without being ſickened by the ſight and ſmell. How much more muſt theſe affect the poor patients, many of whom periſh by this uſage!

This obſervation is likewiſe applicable to hoſpitals, workhouſes, &c. where numbers of children happen to have the ſmall-pox at the ſame time. I

have ſeen above forty children cooped up in one apartment all the while they had this diſeaſe, without any of them being admitted to breathe the freſh air. No one can be at a loſs to ſee the impropriety of ſuch conduct, which generally proceeds from a piece of ill-judged œconomy, to ſave the trifling expence of a few nurſes. It ought to be a rule, not only in hoſpitals for the ſmall-pox, but likewiſe for other diſeaſes, that no patient ſhould be within ſight or hearing of another. This is a mattter to which too little regard is paid in moſt hoſpitals and infirmaries, where the ſick, the dying, and the dead, are often to be ſeen in the ſame apartment.

A very dirty cuſtom prevails amongſt the lower ſort of people, of allowing children in the ſmall-pox to keep on the ſame linen during the whole period of that loathſome diſeaſe. This is done leſt they ſhould catch cold, but it has many ill conſequences. The linen becomes hard by the moiſture which it abſorbs, and frets the tender ſkin. It likewiſe occaſions a bad ſmell, which is very pernicious both to the patient and thoſe about him; beſides, the filth and ſordes which adhere to the linen being abſorbed, or taken up again into the body, greatly augment the diſeaſe.

A patient ſhould not be kept dirty in any diſeaſe, eſpecially in the ſmall-pox. Cutaneous diſorders are often occaſioned by naſtineſs alone, and are always increaſed by it. Were the patient's linen to be changed every day, it would greatly refreſh him. Care indeed is to be taken that the linen be thoroughly dry. It ought likewiſe to be warmed, and put on when the patient is moſt cool.

So ſtrong is the vulgar prejudice in this country, notwithſtanding all that has been ſaid againſt keeping children too warm in the ſmall-pox, that numbers ſtill fall a ſacrifice to that error. I have ſeen poor

poor women travelling in the depth of winter, and carrying their children along with them in the ſmall-pox; and have frequently obſerved others begging by the wayſide, with infants in their arms covered with the puſtules; yet I could never learn that one of theſe children died by this ſort of treatment. We would not, however, propoſe this as an example worthy of imitation; we only mention it to ſhew, that the danger of expoſing children to the open air in this diſeaſe is not ſo great as people are apt to imagine.

The food in this diſeaſe ought to be very light, and of a cooling nature, as water-pap, rice or bread boiled with milk, good apples roaſted or boiled with milk, and ſweetened with a little ſugar, or ſuch like.

The drink may be equal parts of milk and water, clear ſweet-whey, barley-water, or thin gruel, &c. After the pox are full, butter-milk is an excellent drink, being of an opening and cleanſing nature.

MEDICINE.——This diſeaſe is generally divided into four different periods, *viz.* the fever which precedes the eruption, the eruption itſelf, the ſuppuration, or maturation of the puſtules, and the ſecondary fever.

It has already been obſerved, that little more is neceſſary during the primary fever than to keep the patient cool and quiet, allowing him to drink diluting liquors, and bathing his feet frequently in warm water. Though this be generally the ſafeſt courſe that can be taken with infants, yet adults of a ſtrong conſtitution and plethoric habit ſometimes require bleeding. When a full pulſe, a dry ſkin, and other ſymptoms of inflammation, render this operation neceſſary, it ought to be performed; but unleſs theſe ſymptoms are urgent, it may be omitted, and, if the belly be bound, emollient clyſters may be thrown in.

If there be a great naufea or vomiting, weak camomile-tea or lukewarm water may be drank, in order to clean the ftomach. At the beginning of a fever Nature generally attempts a difcharge, either upwards or downwards, which, if promoted by gentle means, would tend greatly to abate the force or violence of the difeafe.

Though every method is to be taken during the primary fever, by a cool regimen, &c. to prevent too great an eruption; yet, after the puftules have made their appearance, our bufinefs is to promote the fuppuration, by gentle warmth, diluting drink, light food, and, if Nature feems to flag, by generous cordials; but the latter ought never to be given unlefs where there is an abfolute neceffity. When a low creeping pulfe, faintifhnefs, and great lofs of ftrength, render cordials neceffary, we would recommend good wine, which may be made into negus, with an equal quantity of water, and fharpened with the juice of orange, the jelly of currants, or the like. Wine-whey, fharpened as above, is likewife a proper drink in this cafe; great care, however, muft be taken not to overheat the patient by any of thefe things. This would retard inftead of promoting the eruption.

Sometimes the rifing of the fmall-pox is prevented by the violence of the fever; in which cafe the cool regimen is ftrictly to be obferved. For example, the patient's chamber muft be kept cool; he ought likewife frequently to be taken out of bed, and to be lightly covered with clothes while in it.

Exceffive reftleffnefs often prevents the rifing and filling of the fmall-pox. When that happens, gentle opiates are neceffary. Thefe, however, ought always to be adminiftered with the greateft caution. To an infant, a tea-fpoonful of the fyrup of poppies may be given every five or fix hours, till

till it has the desired effect. An adult will require a table-spoonful in order to answer the same purpose; and to others, the dose must be proportioned to their age and the violence of the symptoms.

If the patient be troubled with a strangury, or suppression of urine, which often happens in the small-pox, he should be frequently taken out of bed, and, if he be able, should walk across the room with his feet bare. When he cannot do this, he may be frequently set on his knees in bed, and should endeavour to pass his urine as often as he can. When these do not succeed, a tea-spoonful of the sweet spirits of nitre may be occasionally mixed in his drink. Nothing more certainly relieves the patient, or is more beneficial in the small-pox, than a plentiful discharge of urine.

If the mouth be foul, and the tongue dry and chapped, it ought to be frequently washed, and the throat gargled with warm water and honey, sharpened with a little vinegar or currant-jelly.

During the rising of the small-pox, it frequently happens that the patient is eight or ten days without a stool. This not only tends to heat and inflame the blood, but the fæces, by lodging so long in the body, become acrid, and even putrid; from whence bad consequences must ensue. It will, therefore, be proper, when the belly is bound, to throw in an emollient clyster at least every second day, through the whole course of the disease. This will greatly cool and relieve the patient.

When petechiæ, or purple, black, or livid spots, appear among the small-pox, the Jesuits bark must immediately be administered in as large doses as the patient's stomach can bear. For a child, two drams of the bark in powder may be mixed in three ounces of common water, one ounce of simple cinnamon-water, and two ounces of the syrup of orange or lemon. This may be sharpened with

the ſpirits of vitriol, and a table-ſpoonful of it given every hour. If it be given to an adult in the ſame form, he may take at leaſt three or four ſpoonfuls every hour. This medicine ought not to be trifled with, but muſt be thrown in as faſt as the ſtomach can bear it; in which caſe it will often produce very happy effects. I have frequently ſeen the petechiæ diſappear, and ſmall-pox, which had a very threatening aſpect, riſe and fill with laudable matter, by the uſe of the Jeſuits bark and acids *.

The patient's drink ought likewiſe in this caſe to be acidulated with the ſpirits of vitriol, vinegar, juice of lemon, jelly of currants, or ſuch like. His food muſt conſiſt of apples roaſted or boiled, preſerved cherries, plumbs, and other ſharp fruits.

The bark and acids are not only neceſſary when the petechiæ or putrid ſymptoms appear, but likewiſe in the lymphatic or cryſtalline ſmall-pox, where the matter is thin, and not duly prepared. The Jeſuits bark ſeems poſſeſſed of a ſingular power to aſſiſt Nature in preparing laudable pus, or what is called good matter; conſequently it muſt be very beneficial, both in this and other diſeaſes whoſe criſis depends on a ſuppuration. I have often obſerved, where the ſmall-pox were flat, and the matter contained in them quite clear and tranſparent, and where they had the appearance of running into one another, that the uſe of a few drams of the Jeſuits bark, acidulated as above, not only promoted the ſuppuration, but changed the colour and conſiſtence of the matter, and produced the moſt happy effects.

When

* At the ſame time that the bark is exhibited with ſo much freedom, and with ſo much propriety, in this ſpecies of the diſeaſe, wine, as the beſt and moſt powerful cordial that we are acquainted with, ought not to be with-held, but ſhould be given in ſuch quantity as the patient's ſituation may require.

When the eruption ſubſides ſuddenly, or, as the good women term it, when the ſmall-pox ſtrike in, before they have arrived at maturity, the danger is very great. This is often the effect of a hot regimen or medicines, which at the beginning puſh out the matter before it has been properly prepared. When this happens, bliſtering-plaſters muſt be immediately applied to the wriſts and ancles, and the patient's ſpirits ſupported with cordials.

Sometimes bleeding has a ſurpriſing effect in raiſing the puſtules after they have ſubſided; but it requires ſkill to know when this is proper, or to what length the patient can bear it. Sharp cataplaſms, however, may be applied to the feet and hands, as they tend to promote the ſwelling of theſe parts, and by that means to draw the humour towards the extremities.

The moſt dangerous period of the diſeaſe is, what we call the ſecondary fever. This generally comes on when the ſmall-pox begin to turn on the face, and moſt of thoſe who die of the ſmall-pox are carried off by this fever.

Nature generally attempts, at the turn of the ſmall-pox, to relieve the patient by looſe ſtools. Her endeavours, this way, are by no means to be counteracted, but promoted, and the patient, at the ſame time, ſupported by things of a light, but nouriſhing nature. Patients have often been remarkably relieved at this time, by a few looſe ſtools, either brought on by nature, or procured by art. That ſhould encourage us to endeavour to aſſiſt Nature in this way, eſpecially if the ſymptoms be threatening, and the belly continue bound.

If, at the approach of the ſecondary fever, the pulſe be very quick, hard, and ſtrong, the heat intenſe, and the breathing laborious, with other ſymptoms of an inflammation of the breaſt, the patient

patient muſt immediately be bled, otherwiſe a fatal peripneumony will enſue. The quantity of blood to be let, muſt be regulated by the patient's ſtrength, age, and the urgency of the ſymptoms.

But, in the ſecondary fever, if the patient be faintiſh, the puſtules become pale, and ſhrink, and if there be great coldneſs of the extremities, bliſtering plaſters muſt be applied, and the patient muſt be ſupported with generous wine. Wine, and even ſpirits, have ſometimes been given in ſuch deſperate caſes, with amazing ſucceſs.

As the ſecondary fever is in a great meaſure, if not wholly, owing to the abſorption of the matter, it would ſeem highly conſonant to reaſon, that the puſtules, as ſoon as they come to maturity, ſhould be opened. This is every day practiſed in other phlegmons, which tend to ſuppuration; and there ſeems to be no reaſon why it ſhould be leſs proper here. On the contrary, we have reaſon to believe, that by this means the ſecondary fever might always be leſſened, and often wholly prevented.

The puſtules ſhould be opened, when they begin to turn of a yellow colour. Very little art is neceſſary for this operation. They may either be opened with a pair of ſciſſars, or a needle, and the matter abſorbed by a wet ſpunge or a little lint. As the puſtules are generally firſt ripe on the face, it will be proper to begin with opening theſe, and the others in courſe as they become ripe. The puſtules generally fill again, a ſecond, or even a third time, &c.; for which cauſe, the operation muſt be repeated, or rather continued, ſo long as there is any conſiderable appearance of matter in the puſtules.

We have reaſon to believe, that this operation, rational as it is, has been neglected from a piece of miſtaken tenderneſs in parents. They believe, that

that it muſt give great pain to the poor child; and therefore would rather ſee it die than have it thus tortured. This notion, however, is entirely without foundation. It is only the ſcarf-ſkin that is cut, which, upon the top of the puſtules, by the time they are ripe, becomes quite inſenſible. I have frequently opened the puſtules when the patients did not ſee me, without their being in the leaſt ſenſible of it; but ſuppoſe it were attended with a little pain, that is nothing in compariſon to the advantages which ariſe from it

Opening the puſtules not only prevents the abſorption of the matter into the blood, but likewiſe takes off the tenſion of the ſkin, and by that means greatly relieves the patient. It likewiſe prevents the pitting, which is a matter of no ſmall importance. Acrid matter, by lodging long in the puſtules, cannot fail to corrode the tender ſkin; by which many a handſome face becomes ſo deformed, as hardly to bear a reſemblance to the human figure *.

It is commonly neceſſary, after the ſmall-pox are gone off, to purge the patient. If, however, the belly has been open through the whole courſe of the diſeaſe, or if butter-milk and other things of an opening nature have been given after the height of the ſmall-pox, purging becomes leſs neceſſary; though it ought not perhaps to be altogether omitted.

For very young children, an infuſion of ſenna and prunes, with a little rhubarb, may be ſweetened with manna or coarſe ſugar, and given in ſmall quantities till it operate. Thoſe who are farther advanced muſt take medicines of a ſharper nature. For example, a child of four or five years of age may

* This practice, we believe, is now ſeldom or never attempted, moſt probably from being found, upon trial, to be attended with no particular advantage.

may take ten grains of fine rhubarb in powder over night, and the ſame quantity of jalap in powder next morning, with two or three grains of calomel, mixed in currant-jelly, or made into a bolus with a little honey *. He ought to keep the houſe all day, and to drink nothing that is cold. The doſe may be repeated three or four times, five or ſix days intervening betwixt each doſe. For children further advanced, and adults, the doſe muſt be increaſed in proportion to the age and conſtitution.

When impoſthumes happen after the ſmall-pox, which is not ſeldom the caſe, they are to be brought to ſuppuration as ſoon as poſſible, by means of ripening poultices; and, when they have been opened, or break of their own accord, the patient muſt be purged.

When a cough, a difficulty of breathing, or other ſymptoms of a conſumption, ſucceed to the ſmall-pox, the patient muſt be ſent to a well-aired place, and put upon a courſe of aſſes milk, with ſuch exerciſe as he can bear. For further directions in this caſe, ſee the article Conſumptions.

Though no diſeaſe, after it is formed, baffles the powers of medicine more than the ſmall-pox, yet more may be done beforehand to render this diſeaſe favourable, than in any one that we know of, as almoſt all the danger from it may be prevented by inoculation.

OF

* We would conſider this as rather a ſtrong *medium-doſe*, for children of that age; and are of opinion, that the above ingredients taken in the one half, or at moſt two thirds, of the quantity that is here directed, will generally be found ſufficient.

OF INOCULATION.

This ſalutary invention has been known in Europe about half a century, but, like moſt other uſeful diſcoveries, it has met with great oppoſition. It muſt, however, be acknowledged, to the honour of this country, that inoculation has met with a more favourable reception here than with any of our neighbours. It is ſtill, however, far from being general, which we have reaſon to fear will ever be the caſe, ſo long as the practice continues in the hands of the Faculty.

No diſcovery can ever be of general utility while the practice of it is kept in the hands of a few. Had the inoculation of the ſmall-pox been introduced as a faſhion, and not as a medical diſcovery, and had it been practiſed by the ſame kind of operators here as it is in thoſe countries from whence we had it, it had long ago been univerſal. The fears, the jealouſies, the prejudices, and the oppoſite intereſts of the Faculty, are and ever will be the moſt effectual obſtacles to the progreſs of any ſalutary diſcovery *. Hence it is that the practice of inoculation never became in any meaſure general,

* This reflection on the Faculty, we muſt obſerve, appears to us neither very liberal nor well-founded. For, however the paſſions and the oppoſite intereſts of individuals might tend to counteract one another in this as well as in any other branch of the profeſſion; yet, ſince the practice was to be retained in their hands, the paſſions and intereſts of the whole as a body muſt certainly have co-operated jointly to its general extenſion. Beſide the benefit of a party thus in ſome meaſure intereſted in its ſupport, the practice in this way had the farther advantage of not being ſo liable, on its firſt introduction, to be hurt by any unfortunate accident that might attend it; as this was more likely either to be avoided by the ſkill and prudence of thoſe who conducted it, or at leaſt could be better ſupported by their reſponſibility. So far, therefore, are we from agreeing with our Author, that the practice of inoculation, has, by being retained in the hands of the Faculty, been limited and confined, that we maintain, that the practice has in this way, and in this way only could have, become ſo extenſive and almoſt univerſal as it is at this moment.

general, even in England, till taken up by men not bred to phyſic. Theſe have not only rendered the practice more extenſive, but likewiſe more ſafe, and, by acting under leſs reſtraint than the regular practitioners, have taught them that the patient's greateſt danger aroſe, not from the want of care, but from the exceſs of it.

They know very little of the matter, who impute the ſucceſs of modern inoculators to any ſuperior ſkill, either in preparing the patient or communicating the diſeaſe. Some operators indeed, from a ſordid deſire of ingroſſing the whole practice to themſelves, pretend to have extraordinary ſecrets or noſtrums in preparing perſons for inoculation, which never fail of ſucceſs. But this is only a pretence calculated to blind the ignorant and inattentive. Common ſenſe and prudence alone are ſufficient, both in the choice of the ſubject and management of the operation. Whoever is poſſeſſed of theſe may perform this office for his children whenever he finds it convenient, provided they be in a proper ſtate of health; and may reſt aſſured, that he will ſucceed as well as the moſt celebrated inoculator.

This ſentiment is not the reſult of theory, but of obſervation. Though few phyſicians have had more opportunities of trying inoculation in all its different forms, ſo little appears to me to depend on theſe, generally reckoned important circumſtances, of preparing the body, communicating the infection by this or the other method, &c. that for ſeveral years paſt I have cauſed the parents or nurſes perform the whole themſelves, and have found that method followed with equal ſucceſs, while it is free from many inconveniences that attend the other.

A critical ſituation, too often to be met with, firſt put me upon trying this method. A gentleman

man who had loſt all his children, except one ſon, by the natural ſmall-pox, was determined to have him inoculated. He told me his intention, and deſired I would perſuade the mother and grandmother, &c. of its propriety. But that was impoſſible. They were not to be perſuaded, and either could not get the better of their fears, or were determined againſt conviction. It was always a point with me, not to perform the operation without the conſent of parties concerned. I therefore adviſed the father, after giving his ſon a doſe or two of rhubarb, to go to a patient who had the ſmall-pox of a good kind, to open two or three of the puſtules, taking up the matter with a little cotton, and as ſoon as he came home to take his ſon into a private room, and give his arm a light ſcratch with a pin, as if it had been by accident, afterwards to rub the place well with the cotton, and take no further notice of it. All this he punctually performed; and at the uſual period the ſmall-pox made their appearance, which were of an exceeding good kind, and ſo mild as not to confine the boy an hour to his bed. None of the other relations knew but the diſeaſe had come in the natural way till the patient was well.

We do not propoſe this as the only method in which the ſmall-pox can be communicated. It appears from experience, that this may be done in various ways with equal ſucceſs. In Turkey, from whence we learned the practice, the women communicate the diſeaſe to children, by opening a bit of the ſkin with a needle, and putting into the wound a little matter taken from a ripe puſtule. On the coaſt of Barbary they paſs a thread wet with the matter through the ſkin, between the thumb and fore-finger; and in Europe inoculation is generally performed by making a ſmall inciſion through the cuticle of the arm or leg with a lancet,

and

and laying a bit of thread wet with the matter upon the wound, which is covered with a piece of ſticking-plaſter, and kept on for two or three days.

Some of the people in England who make a trade of inoculation, only open one of the ripe puſtules with a lancet, and while it is wet with the matter, make a ſlight inciſion in the arm of the perſon to whom they want to communicate the diſeaſe; afterwards they cloſe up the wound, and leave it without any other dreſſing. This ſeems to be no real improvement. It frequently fails to communicate the diſeaſe, and is far leſs certain than when a ſcratch with a pin or a needle is made, and a bit of thread wet with the matter kept on the wound for ſome days by a ſticking-plaſter *.

Indeed, if the matter be applied long enough to the ſkin, there is no occaſion for any wound at all. Let a bit of thread, about half an inch long, wet with the matter, be applied to the arm, midway between the ſhoulder and elbow, and covered with a piece of the common black ſticking-plaſter, and kept on for eight or ten days. This will ſeldom fail to communicate the diſeaſe. We mention this method becauſe many people are afraid of a wound; and doubtleſs the more eaſily the operation can be performed, it has the greater chance to become general. Some people imagine, that the diſcharge from a wound leſſens the eruption; but there is not much ſtreſs to be laid upon this notion: Beſides, deep wounds often ulcerate, and become troubleſome.

We

* The common method of inoculating in this country at preſent is, by making two or three ſcratches or punctures, ſcarcely through the ſkin, with the point of a lancet that had been previouſly wet with matter taken from a ripe puſtule. If the matter, as frequently happens, from the difficulty of procuring it always freſh, has become dry before it be uſed, it is ſoftened again by holding it in the ſteam of warm water.

We do not find that inoculation is at all conſidered as a medical operation in thoſe countries from whence we learned it. In Turkey it is performed by the women, and in the Eaſt Indies by the Brachmins or Prieſts. In this country the cuſtom is ſtill in its infancy; we make no doubt, however, but it will become ſo familiar, that parents will think no more of inoculating their own children, than at preſent they do of giving them a doſe of phyſic.

No ſet of men have it ſo much in their power to render the practice of inoculation general as the clergy, the greateſt oppoſition to it ſtill ariſing from ſome ſcruples of conſcience, which they alone can remove. We would recommend it to them, not only to endeavour to remove the religious objections which weak minds may have to this ſalutary practice, but to enjoin it as a duty, and to point out the danger of neglecting to make uſe of a mean which Providence has put in our power for ſaving the lives of our offſpring. Surely ſuch parents as wilfully neglect the means of ſaving their children, are as guilty as thoſe who put them to death. We wiſh this matter were duly weighed. No one is more ready to make allowance for human weakneſs and religious prejudices, yet I cannot help recommending it, in the warmeſt manner, to parents to conſider how great an injury they do their children, by neglecting to give them this diſeaſe in the early period of life.

The numerous advantages attending inoculation of the ſmall-pox, have been pretty fully pointed out by the learned Dr M'Kenzie, in his Hiſtory of Health: "Many and great," ſays this humane author, "are the dangers attending the natural infection, from all which the inoculation is quite ſecure. The natural infection may invade weak or diſtempered bodies, by no means diſpoſed for its

kindly reception. It may attack them at a ſeaſon of the year either violently hot, or intenſely cold. It may be communicated from a ſort of ſmall-pox impregnated with the utmoſt virulence. It may lay hold upon people unexpectedly, when a dangerous ſort is imprudently imported into a maritime place. It may ſurpriſe us ſoon after exceſſes committed in luxury, intemperance, or lewdneſs. It may likewiſe ſeize on the innocent, after indiſpenſible watchings, hard labour, or neceſſary journies. And is it a trivial advantage, that all theſe unhappy circumſtances can be prevented by inoculation? By inoculation numbers are ſaved from deformity, as well as from death. In the natural ſmall-pox, how often are the fineſt features, and the moſt beautiful complexions, miſerably diſfigured? Whereas inoculation rarely leaves any ugly marks or ſcars, even where the number of puſtules on the face have been very conſiderable, and the ſymptoms by no means favourable. And many other grievous complaints, that are frequently ſubſequent to the natural ſort, ſeldom follow the artificial. Does not inoculation alſo prevent thoſe inexpreſſible terrors that perpetually haraſs perſons who never had this diſeaſe, inſomuch that when the ſmall-pox is epidemical, entire villages are depopulated, markets ruined, and the face of diſtreſs ſpread over the whole country? From this terror it ariſes, that juſtice is frequently poſtponed, or diſcouraged, at ſeſſions or aſſizes, where the ſmall-pox rages. Witneſſes and juries dare not appear; and, by reaſon of the neceſſary abſence of ſome gentlemen, our honourable and uſeful judges are not attended with that reverence and ſplendor due to their office and merit. Does not inoculation in like manner prevent our brave ſailors from being ſeized with this diſtemper on ſhipboard, where they muſt quickly ſpread the infection among ſuch of the crew

crew who never had it before, and where they have ſcarce any chance to eſcape, being half-ſtifled with the cloſeneſs of their cabins, and but very indifferently nurſed? Laſtly, with regard to the ſoldiery, the miſeries attending theſe poor creatures, when attacked by the ſmall-pox on a march, is inconceivable, without attendance, without lodgings, without any accommodations; ſo that one of three commonly periſhes."

We ſhall only add, that ſuch as have not had the ſmall-pox in the early period of life, are not only rendered unhappy, but likewiſe in a great meaſure unfit for ſuſtaining many of the moſt uſeful and important offices. Few people would chuſe even to hire a ſervant who had not had the ſmall-pox, far leſs to purchaſe a ſlave who had the chance of dying of this diſeaſe. How could a phyſician or a ſurgeon, who had never had the ſmall-pox himſelf, attend others under that malady? Thus, beſide the continual fears and anxiety which haunt thoſe perſons who have not had the ſmall-pox, we might ſhew numberleſs inconveniences which ariſe from it. For example,

How deplorable is the ſituation of females, who arrive at mature age without having had the ſmall-pox! A woman with child ſeldom ſurvives this diſeaſe: And if an infant happens to be ſeized with the ſmall-pox upon the mother's breaſt who has not had the diſeaſe herſelf, the ſcene muſt be diſtreſſing! If ſhe continues to ſuckle the child, it is at the peril of her own life; and if ſhe weans it, in all probability it will periſh. How often is the affectionate mother forced to leave her houſe, and abandon her children, at the very time when her care is moſt neceſſary! But ſhould parental affection get the better of her fears, the conſequences will often prove fatal. I have known the tender mother and her infant-child laid in the ſame grave,

both untimely victims to this dreadful malady. But theſe are ſcenes too ſhocking even to mention. Let parents who run away with their children to avoid the ſmall-pox, or who refuſe to inoculate them in infancy, conſider to what deplorable ſituations they may be reduced by this miſtaken tenderneſs.

As the ſmall-pox has now become a conſtitutional diſeaſe in moſt parts of the known world, no other choice remains but to render the malady as mild as poſſible; that is the only manner of extirpation now left in our power; and, though it may ſeem paradoxical, this artificial method of planting the diſeaſe, could it be rendered univerſal, would amount to nearly the ſame thing as rooting it out. It is a matter of ſmall conſequence, whether a diſeaſe be entirely extirpated, or rendered ſo mild as neither to deſtroy life nor hurt the conſtitution; but that this may be done by inoculation, does not now admit of a doubt. The numbers who die under inoculation hardly deſerve to be named. In the natural way, one in four or five generally die; but by inoculation not one of a thouſand. Nay, ſome can boaſt of having inoculated ten thouſand without the loſs of a ſingle patient.

I have often wiſhed to ſee ſome plan eſtabliſhed for rendering this ſalutary practice univerſal; but am afraid I ſhall never be ſo happy. The difficulties indeed are many; yet the thing is by no means impracticable. The aim is great; no leſs than ſaving the lives of one-fourth of mankind. What ought not to be attempted in order to accompliſh ſuch an end?

The firſt ſtep towards rendering the practice univerſal, muſt be to remove the religious prejudices againſt it. This, as already obſerved, can only be done by the clergy. They muſt not only recommend it as a duty to others, but likewiſe practice it

it on their own children. Example will ever have more influence than precept.

The next thing requiſite is to put it in the power of all. For this purpoſe, we would recommend it to the Faculty to inoculate the children of the poor *gratis*. It is hard that thoſe who are certainly the moſt uſeful part of mankind ſhould, by their poverty, be excluded from ſuch a benefit.

Should this fail, it is ſurely in the power of any State to render the practice general, at leaſt as far as its dominion extends. We do not mean, that it ought to be enforced by a law: That, there is reaſon to believe, would rather tend to obſtruct its progreſs. The way to promote it would be, to employ a ſufficient number of operators, at the public expence, to inoculate the children of the poor. This would only be neceſſary till the practice became general; afterwards cuſtom, the ſtrongeſt of all laws, would oblige every one to inoculate their children, to prevent reflections.

It may be objected to this ſcheme, that the poor would refuſe to employ the inoculators: That is eaſily removed. A ſmall premium to enable mothers to attend their children while under the diſeaſe, would be a ſufficient inducement; beſides, the ſucceſs attending the operation would ſoon baniſh all objections to it: Even conſiderations of profit would induce the poor to embrace this plan. They often bring up their children to the age of ten or twelve, and when they come to be uſeful, they are ſnatched away by this malady, to the great loſs of their parents and detriment of the public.

The Britiſh Legiſlature has, of late years, ſhown great attention to the preſervation of infant-lives, by ſupporting the Foundling-hoſpital, &c. But we will venture to ſay, if one-tenth part of the ſums laid out in ſupporting that inſtitution, had

been beſtowed towards promoting the practice of inoculation of the ſmall-pox among the poor, that not only more uſeful lives had been ſaved, but the practice ere now rendered quite univerſal in this iſland. It is not to be imagined what effect example and a little money will have upon the poor; yet, if left to themſelves, they will go on for ever in the old way, without thinking of any improvement. We only mean this as a hint to the humane and public-ſpirited. Should ſuch a ſcheme be adopted, a proper plan might eaſily be laid down for the execution of it.

As all public plans are very difficult to bring about, and often, by the ſelfiſh views or miſconduct of thoſe intruſted with the execution of them, fail of anſwering the noble purpoſes for which they were deſigned, we ſhall therefore point out ſome other methods by which the benefits of inoculation may be extended to the poor.

There is no doubt but inoculators will be daily more numerous. We would, therefore, have every pariſh in Britain to allow one of them a ſmall annual ſalary for inoculating all the children of the pariſh at a proper age. Though ſome refractory perſons might for a while object to this method, they would ſoon be obliged to comply with it, or run the hazard of being reckoned the murderers of their own children.

Two things chiefly operate to prevent the progreſs of inoculation. The one is a wiſh to put the evil day as far off as poſſible. This is a principle in our nature; and as inoculation ſeems rather to be anticipating a future evil, it is no wonder mankind are ſo averſe from it. But this objection is ſufficiently anſwered by the ſucceſs. Who in his ſenſes would not prefer a leſſer evil to-day to a greater to-morrow, provided it were equally certain?

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The other obſtacle is the fear of reflections. This has very great weight with the bulk of mankind. Should the child die, they think the world would look down upon them. This they cannot bear. Here lies the difficulty which pinches; and till that be removed, inoculation will make but ſmall progreſs. Nothing can remove it but cuſtom. Make the practice faſhionable, and all objections at once vaniſh. It is faſhion alone that has led the multitude ſince the beginning of the world, and will lead them to the end. We muſt therefore call upon the more enlightened part of mankind to ſet a pattern to the reſt. Their example, though it may for ſome time meet with oppoſition, muſt at length infallibly prevail.

I am aware of an objection to this practice from the expence with which it may be attended; this is eaſily obviated. We do not mean that every pariſh ought to employ a Sutton or a Dimſdale as inoculators. Theſe have, by their ſucceſs, already recommended themſelves to crowned heads, and are beyond the vulgar reach; but have not others an equal chance to ſucceed? They certainly have. Let them make the ſame trial, and the difficulties will ſoon vaniſh. There is not a pariſh, and hardly a village in Britain, deſtitute of ſome perſon who can bleed. But this is a far more difficult operation, and requires both more ſkill and time, than inoculation.

The perſons to whom we would chiefly recommend the performance of this operation are the clergy. Moſt of them know ſomething of medicine. Almoſt all of them bleed, and can order a purge, which are all the qualifications neceſſary for the practice of inoculation. The Prieſts among the leſs enlightened Indians perform this office, and why ſhould a Chriſtian teacher think himſelf above it? Surely the bodies of men, as well as

their ſouls, merit a part of the paſtor's care; at leaſt the greateſt Teacher who ever appeared among men ſeems to have thought ſo.

Should all other methods fail, we would recommend it to parents to perform the operation themſelves. Let them take any method of communicating the diſeaſe they pleaſe, provided the ſubject be healthy, and of a proper age; and we may venture to warrant their ſucceſs. I have known many inſtances of parents performing the operation, and never ſo much as heard of one bad conſequence. A planter in one of the Weſt-India iſlands is ſaid to have inoculated with his own hand, in one year, three hundred of his ſlaves, who, notwithſtanding the warmth of the climate, and other unfavourable circumſtances, all did well. Common mechanics have often, to my knowledge, performed the operation with as good ſucceſs as phyſicians. We do not, however, mean to diſcourage thoſe who have it in their power from employing people of ſkill to inoculate their children, and attend them while under the diſeaſe, but only to ſhew, that where ſuch cannot be had, the operation ought not upon that account to be neglected.

Inſtead of multiplying arguments to this effect, I ſhall juſt beg leave to mention the method which I took with my own child, an only ſon. After giving him two gentle purges, I ordered the nurſe to take a bit of thread which had been previouſly wet with freſh matter from a pock, and to lay it upon his arm, covering it with a piece of ſticking-plaſter. This ſtaid on ſix or ſeven days, till it was rubbed off by accident. At the uſual time the ſmall-pox made their appearance, and were exceedingly favourable. Surely this, which is all that is for the moſt part neceſſary, may be done without any ſkill in medicine.

The beſt ſeaſons of the year for inoculation is towards

towards the end of the ſpring, and in the beginning of ſummer. It may, however, be done at any time of the year, if circumſtances render it neceſſary.

The moſt proper age for inoculation is betwixt two and five. Many diſagreeable circumſtances attend inoculating children upon the breaſt, which we have not time to enumerate. Neither ſhould the operation be too long delayed. When the fibres begin to grow rigid, and children make uſe of groſſer food, the ſmall-pox become more dangerous *.

Children who have conſtitutional diſeaſes, muſt nevertheleſs be inoculated. It will often mend the habit of body; but ought to be performed at a time when they are moſt healthy. Accidental diſeaſes ſhould always be removed before inoculation.

The moſt healthy ſtate is always to be choſen, as that muſt be the beſt preparation. The next ſtep is to regulate the diet for ſome time before the diſeaſe is communicated. In children great alteration in diet is ſeldom neceſſary, their food being commonly of the moſt ſimple and wholeſome kind; as milk, water-pap, ſmall broths, bread, light pudding, mild roots, and white meats.

Children, however, who have been accuſtomed to a hotter diet, who are of a groſs habit, or abound with bad humours, ought to be put upon a ſpare diet before they be inoculated. Their food ſhould be of a light cooling nature; and their drink whey, butter-milk, and ſuch like.

We would recommend no other medicinal preparation but two or three mild purges, which ought

* Children in this country are now generally inoculated on the breaſt, and the diſeaſe is found to be rendered milder in general by this practice.

ought to be ſuited to the age and ſtrength of the patient. It is no doubt poſſible, by purgative and mercurial medicines, to leſſen the eruption; but it very ſeldom happens, that the eruption in this way proves too great; and we have always obſerved, that thoſe children who had a pretty free eruption, and where the pox filled well, enjoyed the beſt health afterwards.

The regimen during the diſeaſe muſt be the ſame as under the natural ſmall-pox. The patient muſt be kept cool, his diet muſt be light, and his drink weak and diluting, &c. Should any bad ſymptoms appear, which ſeldom happens, they muſt be treated in the ſame way as directed in the natural ſmall-pox. Purging is not leſs neceſſary after the ſmall pox by inoculation, than in the natural way, and ought by no means to be neglected.

OF THE MEASLES.

The meaſles appeared about the ſame time with the ſmall-pox, and are nearly related to that diſeaſe. They both came from the Eaſt, are both infectious, and ſeldom attack people more than once. The meaſles are moſt common in the ſpring-ſeaſon, and generally diſappear in ſummer. The diſeaſe itſelf, when properly managed, is ſeldom dangerous; but its conſequences are often fatal.

CAUSE.——This diſeaſe, like the ſmall-pox, proceeds from infection, and is more or leſs dangerous according to the conſtitution of the patient, the ſeaſon of the year, the climate, &c.

SYMPTOMS.——The meaſles, like other fevers,

vers, are preceded by alternate fits of heat and cold, ſickneſs, and loſs of appetite. The tongue is white, but generally moiſt. There is a ſhort cough, a heavineſs of the head and eyes, drowſineſs, and running of the noſe. Sometimes indeed the cough does not come before the eruption. The eye-lids frequently ſwell ſo as to occaſion blindneſs. The patient generally complains of his throat; and vomiting or looſeneſs often precedes the eruption. The ſtools in children are commonly greeniſh; they complain of an itching of the ſkin, and are remarkably peeviſh. Bleeding at the noſe is common, both before and in the progreſs of the diſeaſe.

About the fourth day, ſmall ſpots, reſembling flea-bites, appear, firſt upon the face, then upon the breaſt, and afterwards on the extremities: Theſe may be diſtinguiſhed from the ſmall-pox by their ſcarcely riſing above the ſkin. The fever, cough, and difficulty of breathing, inſtead of being removed by the eruption, as in the ſmall-pox, are rather increaſed; but the vomiting generally ceaſes.

About the ſixth day, the meaſles begin to grow dry on the face, and afterwards upon the body; ſo that by the ninth day they entirely diſappear. The fever, however, and difficulty of breathing, often continue, eſpecially if the patient has been kept upon too hot a regimen. Petechiæ, or purple ſpots, may likewiſe be occaſioned by this error.

A violent looſeneſs ſometimes ſucceeds the meaſles; in which caſe the patient's life is in imminent danger.

Such as die of the meaſles, generally expire about the ninth day, and are evidently carried off by a peripneumony, or inflammation of the lungs.

The moſt favourable ſymptoms are a moderate looſeneſs,

looſeneſs, gentle ſweats, and a plentiful diſcharge of urine.

When the eruption ſuddenly falls in, and the patient is ſeized with a delirium, he is in the greateſt danger. If the meaſles turn too ſoon of a pale colour, it is an unfavourable ſymptom, as are alſo great weakneſs, vomiting, reſtleſſneſs, and difficulty of ſwallowing. Purple or black ſpots appearing among the meaſles, are very unfavourable. When a continual cough, with hoarſeneſs, ſucceeds the diſeaſe, there is reaſon to ſuſpect an approaching conſumption of the lungs.

Our buſineſs in this diſeaſe is to aſſiſt Nature, if her efforts be too languid, in throwing out the morbid matter, by proper cordials; but when they are too violent, they muſt be reſtrained by evacuations, and cool diluting liquors, &c. We ought likewiſe to endeavour to appeaſe the moſt urgent ſymptoms, as the cough, reſtleſſneſs, and difficulty of breathing.

REGIMEN.——The regimen in this diſeaſe ſhould be of the ſame kind with that recommended in the ſmall-pox, viz. cooling and diluting. Acids, however, do not anſwer ſo well here as in ſmall-pox, as they tend to exaſperate the cough. Small beer likewiſe, though a good drink in the ſmall-pox, is here improper. The moſt ſuitable liquors are decoctions of liquorice, with marſh-mallow-roots, and ſarſaparilla, infuſions of linſeed, or of the flowers of elder, with milk, clarified whey, barley-water, and ſuch like. Theſe, if the belly be bound, may be ſweetened with honey; or, if that ſhould diſagree with the ſtomach, a little manna may occaſionally be added to them.

MEDICINE.——The meaſles being an inflammatory diſeaſe, without any critical diſcharge of matter, as in the ſmall-pox, bleeding is commonly neceſſary, eſpecially when the fevers run high, with

with difficulty of breathing, and great oppreſſion of the breaſt *. But if the diſeaſe be of a mild kind, bleeding may be omitted.

Bathing the feet and legs in lukewarm water both tends to abate the violence of the fever, and to promote the eruption.

The patient is often greatly relieved by vomiting. When there is a tendency this way, it ought not to be ſtopped, but encouraged by drinking lukewarm water, or weak camomile-tea.

When the cough is very troubleſome, with dryneſs of the throat, and difficulty of breathing, it will greatly relieve the patient, if he holds his head over the ſteam of warm water, and draws the ſteam into his lungs.

He may likewiſe lick a little ſpermaceti and ſugar-candy pounded together; or take now and then a ſpoonful of the oil of ſweet almonds, with ſugar-candy diſſolved in it. Theſe will ſoften the throat, and relieve the tickling cough.

In caſe the meaſles ſhould ſuddenly diſappear, it will be neceſſary to purſue the ſame method which we have recommended when the ſmall-pox fall in. The patient muſt be ſupported with wine and cordials. Bliſtering-plaſters muſt be applied to the extremities, and the body rubbed all over with warm flannels. Warm poultices may likewiſe be applied to the feet and palms of the hand.

When purple or black ſpots appear, the patient's drink ſhould be ſharpened with ſpirits of vitriol; and if the putrid ſymptoms run high, the Jeſuits bark

* Theſe ſymptoms of pneumonic affection, whenever they occur certainly indicate the propriety of blood-letting. This remedy, however, is often required towards the end of this diſeaſe, though it had not been neceſſary at the beginning; as the ſymptoms denoting an affectionof the lungs often do not appear, till after the deſquamation of the meaſles; in this caſe, we truſt ſolely to bleeding, bliſtering, laxatives, cooling diet, &c.

bark muſt be adminiſtered in the ſame manner as directed in the ſmall-pox.

Opiates are ſometimes neceſſary, but ſhould never be given except in caſe of extreme reſtleſſneſs, a violent looſeneſs, or when the cough is very troubleſome. For children, the ſyrup of poppies is ſufficient. A tea-ſpoonful or two may be occaſionally given, according to the patient's age, or the violence of the ſymptoms.

After the meaſles are gone off, purging is abſolutely neceſſary. This may be conducted in the ſame manner as directed in the ſmall-pox.

If a violent looſeneſs ſucceeds the meaſles, it may be checked by taking for ſome days a gentle doſe of rhubarb in the morning, and an opiate over night; but if theſe do not remove it, bleeding will ſeldom fail to have that effect.

Patients recovering after the meaſles ſhould be very careful what they eat or drink. Their food, for ſome time, ſhould be light, and in ſmall quantities, and their drink diluting, and rather of an opening nature; as butter-milk, whey, and ſuch like. They ought alſo to beware of expoſing themſelves to the cold air, leſt a ſuffocating catarrh, an aſthma, or a conſumption of the lungs, ſhould enſue.

Should a cough, with difficulty of breathing, and other ſymptoms of a conſumption, remain after the meaſles, we would recommend ſmall quantities of blood to be frequently let at proper intervals, as the patient's ſtrength and conſtitution will bear. He ought likewiſe to drink aſſes milk, to remove to a free air, if neceſſary, and to ride daily on horſeback. He muſt keep cloſe to a diet conſiſting of milk and vegetables; and laſtly, if theſe do not ſucceed, let him remove to a warmer climate.

OF

OF THE SCARLET FEVER.

The ſcarlet fever is ſo called from the colour of the patient's ſkin, which appears as if it were tinged with red wine. It happens at any ſeaſon of the year, but is moſt common in the latter end of ſummer; at which time it often ſeizes whole families, eſpecially children.

It begins with coldneſs and ſhivering, as other fevers, without any violent ſickneſs. Afterwards the ſkin is covered with red ſpots, which are broader, more florid, and leſs uniform, than the meaſles. They continue two or three days, and then diſappear; after which the cuticle, or ſcarf-ſkin, falls off*.

There is ſeldom any occaſion for medicine in this diſeaſe. The patient ought, however, to keep within doors, to abſtain from fleſh, ſtrong liquors, and cordials, and to take plenty of cool diluting drink. If the fever be high, the belly muſt be kept gently open by emollient clyſters, or ſmall doſes of nitre and rhubarb. A ſcruple of the former, with five grains of the latter, may be taken thrice a-day, or oftener if neceſſary.

Children and young perſons are ſometimes ſeized, at the beginning of this diſeaſe, with a kind of ſtupor and epileptic fits. In this caſe, the feet and legs ſhould be bathed with warm water, a large bliſtering-plaſter applied to the neck, and a doſe of the ſyrup of poppies given every night till the patient recovers.

OF

* Along with the ſcarlet eruption mentioned above, this diſeaſe is generally accompanied with an affection of the internal fauces. Theſe, on inſpection, at the beginning of this complaint, appear more or leſs inflamed; and are afterwards covered with thick white ſloughs, which, on falling off, leave the parts beneath ulcerated. Theſe ulcers ſometimes put on a livid, black, gangrenous appearance;

OF THE ERYSIPELAS, OR ST ANTHONY'S FIRE.

This diſeaſe, which in many parts of Britain is called *The Roſe*, attacks perſons at all periods of life, but is moſt common between the age of thirty and forty. Perſons of a ſanguine or plethoric habit, are moſt liable to it. It often attacks young people and pregnant women; and ſuch as have once been afflicted with it are very liable to have it again. Sometimes it is a primary diſeaſe, and at other times only a ſymptom of ſome other malady. Every part of the body is liable to be attacked by an eryſipelas, but it moſt frequently ſeizes the legs or face, eſpecially the latter. It prevails moſt in autumn, or when hot weather is ſucceeded by cold and wet.

CAUSES.——The eryſipelas is frequently occaſioned by violent paſſions or affections of the mind; as fear, anger, &c. It is likewiſe occaſioned by cold. When the body has been heated to a great degree, and is immediately expoſed to the cold air, ſo that the perſpiration is ſuddenly checked, an eryſipelas will often enſue. It may alſo be occaſioned by exceſs in ſtrong liquor, by continuing too long in a warm bath, or by any thing that overheats the blood. If any of the natural evacuations be obſtructed, or in too ſmall quantity, it may cauſe an eryſipelas. The ſame effect will follow from the ſtoppage of artificial evacuations; as iſſues, ſetons, or the like.

SYMPTOMS.——The eryſipelas attacks with a

ance; while, at the ſame time, the pulſe becomes frequent and irregular, the breathing oppreſſed, and other ſymptoms of great general debility occur. Antiſeptics and tonics are the only remedies to be depended on in this ſituation. Antiſeptic gargles of bark and vitriolic acid are to be uſed frequently for waſhing the throat with, whilſt we endeavour to ſupport the ſyſtem, by a liberal uſe of the ſame medicines internally, along with wine and other cordials.

a violent ſhaking, heat, thirſt, loſs of ſtrength, pain in the head and back, reſtleſſneſs, and a quick pulſe; to which may be added vomiting, and ſometimes a delirium. On the ſecond, third, or fourth day, the part ſwells, becomes red, and ſmall puſtules appear; at which time the fever generally abates.

When the eryſipelas ſeizes the foot, the parts contiguous ſwell, the ſkin ſhines; and, if the pain be violent, it will aſcend to the leg, and will not bear to be touched.

When it attacks the face, it ſwells, appears red, and the ſkin is covered with ſmall puſtules filled with clear water. One or both eyes are generally cloſed with the ſwelling; and there is a difficulty of breathing. If the mouth and noſtrils be very dry, and the patient drowſy, there is reaſon to ſuſpect an inflammation of the brain.

If the eryſipelas affects the breaſt, it ſwells, and becomes exceedingly hard, with great pain, and is apt to ſuppurate. There is a violent pain in the arm-pit on the ſide affected, where an abſceſs is often formed.

The event of this diſeaſe depends greatly upon the conſtitution of the patient. It is ſeldom dangerous; yet I have known it prove fatal to people in the decline of life, who were of a ſcorbutic habit, or whoſe humours were vitiated by irregular living, or unwholeſome diet.

If in a day or two the ſwelling ſubſides, the heat and pain ceaſe, the roſy colour turns yellow, and the cuticle breaks and falls off in ſcales, the danger is over.

When the eryſipelas is large, deep, and affects a very ſenſible part of the body, the danger is great. If the red colour changes into black or blue, it will end in a mortification. Sometimes the inflammation cannot be diſcuſſed, but comes

to a ſuppuration; in which caſe fiſtulas, a gangrene, or mortification, generally enſue. Where the conſtitution was bad, I have frequently ſeen the leg ſwell to a prodigious ſize, and the cure prove extremely difficult.

Such as die of this diſeaſe are moſtly carried off by the fever, which is attended with difficulty of breathing, ſometimes with a delirium and great drowſineſs. They generally die about the ſeventh or eighth day.

REGIMEN.——In this diſeaſe the patient muſt neither be kept too hot nor cold, as either of theſe extremes will tend to make the diſeaſe retreat, which is always to be guarded againſt. When the diſeaſe is mild, it will be ſufficient to keep the patient within doors, without confining him to his bed, and to promote the perſpiration by diluting liquors, &c.

The diet ought to be very ſpare, and of a moderately cooling and moiſtening quality; as water-gruel, panado, ſmall chicken or barley broth, with cooling herbs and fruits, &c. avoiding fleſh, fiſh, ſtrong drink, ſpices, pickles, and all other things that may heat and inflame the blood; the drink may be barley-water, an infuſion of elder flowers, common whey, and ſuch like.

But if the pulſe be low, and the ſpirits ſunk, the patient muſt be ſupported with ſmall negus, and other things of a cordial nature. His food may be ſago-gruel with a little wine, and nouriſhing broths, taken in ſmall quantities, and often repeated. Great care, however, muſt be had not to overheat him.

MEDICINE.——In this diſeaſe much miſchief is often done by medicine, eſpecially by external applications. People, when they ſee an inflammation, immediately think of ſome external applications. Theſe indeed are neceſſary in large phlegmons;

phlegmons; but in an eryſipelas the ſafer courſe is to apply nothing. Almoſt all ointments, ſalves, and plaiſters, are of a greaſy nature, and tend rather to obſtruct and repel than promote any diſcharge from the part. At the beginning of this diſeaſe, it is neither ſafe to promote a ſuppuration, nor to repel the matter too quickly. The eryſipelas in many reſpects reſembles the gout, and is to be treated with the greateſt caution. Fine wool, or very ſoft flannel, are the ſafeſt applications to the part. Theſe not only defend it from the external air, but likewiſe promote the perſpiration, which has a great tendency to carry off the diſeaſe *.

It is a common thing to bleed in the eryſipelas; but this likewiſe requires caution. If, however, the fever be high, the pulſe hard and ſtrong, and the patient vigorous, it will be proper to bleed; but the quantity muſt be regulated by theſe circumſtances, and the operation repeated or not as the ſymptoms may require. If the patient has been accuſtomed to ſtrong liquors, and the diſeaſe attacks his head, bleeding is abſolutely neceſſary.

Bathing the feet and legs frequently in lukewarm water, when the diſeaſe attacks the face or brain, has an excellent effect. It tends to draw the humours from the head towards the inferior extremities, and ſeldom fails to relieve the patient. When bathing proves ineffectual, poultices, or ſharp ſinapiſms, may be applied to the ſoles of the feet for the ſame purpoſe.

In caſes where bleeding is requiſite, it is likewiſe neceſſary to keep the belly gently open. This may be effected by emollient clyſters, or ſmall doſes of nitre and rhubarb, ſuch as are preſcribed in the foregoing diſeaſe. Some indeed recommend

* The common application in this country is a little hair-powder or fine flour duſted upon the part.

very large doſes of nitre in this caſe; but nitre ſeldom ſits eaſy on the ſtomach when taken in large quantities. It is, however, one of the beſt medicines in this caſe, and when the fever and inflammation run high, half a dram of it may be taken in the patient's ordinary drink, three or four times a-day.

The ſaline julep, as it is called, is likewiſe a very proper medicine in the eryſipelatous fever. It may be made by diſſolving two drams of ſalt of wormwood, or ſalt of tartar, in three ounces of freſh lemon-juice, to which may be added two ounces of common water, and an ounce or two of peppermint water, with as much white ſugar as will render it agreeable. Of this two table-ſpoonfuls may be taken every two or three hours.

When the eryſipelas leaves the extremities, and ſeizes the head, ſo as to occaſion a delirium or ſtupor, it is abſolutely neceſſary to open the belly. If clyſters and mild purgatives fail to have that effect, ſtronger ones muſt be given. Bliſtering-plaſters muſt likewiſe be applied to the neck, or behind the ears, and ſharp cataplaſms laid to the ſoles of the feet.

When the eryſipelas cannot be diſcuſſed, and the pain lies deep, and ſeems to reach to the membrane which covers the bones, and the part has a tendency to ulcerate, it will then be proper to promote ſuppuration, which may be done by the application of ripening poultices with ſaffron, warm fomentations, and ſuch like.

When the black, livid, or blue colour of the part, ſhews a tendency to mortification, the Jeſuits bark muſt be adminiſtered. It may be taken along with acids, as recommended in the ſmall-pox, or in any other form more agreeable to the patient. It muſt not, however, be trifled with, as the patient's life is at ſtake. Half a dram, or even a tea-

ſpoonful,

ſpoonful, may be taken every two hours, or oftener, if the ſymptoms be threatening, and cloths dipped in warm camphorated ſpirits of wine, or the tincture of myrrh and aloes, may be applied to the part, and frequently renewed.

In what is commonly called the ſcorbutic eryſipelas, which continues for a conſiderable time, it it will only be neceſſary to give gentle laxatives, and ſuch things as purify the blood. Medicines which promote the perſpiration are likewiſe proper. Thus, after the inflammation has been checked by opening medicines, a decoction of the ſudorific woods, as ſaſſafras and guaiacum, with liquorice-root, may be drank, and afterwards a courſe of bitters, which will both ſtrengthen the ſtomach and purify the blood.

Such as are liable to frequent attacks of the eryſipelas ought carefully to guard againſt all violent paſſions; to abſtain from ſtrong liquors, and all fat, viſcid, and highly nouriſhing food. They ſhould take abundance of exerciſe, carefully avoiding the extremes of heat or cold. Their food ſhould conſiſt chiefly of milk, and ſuch fruits, herbs, and roots, as are of a cooling quality; and their drink ought to be ſmall beer, whey, butter-milk, and ſuch like. They ſhould never ſuffer themſelves to be too long coſtive. If that cannot be prevented by diet alone, it will be proper to take frequently a gentle doſe of rhubarb and cream of tartar, the lenitive electuary, or ſome other mild purgative.

OF THE INFLAMMATION OF THE BRAIN.

This is ſometimes a primary diſeaſe, but oftener only a ſymptom of ſome other malady; as the inflammatory, eruptive, or ſpotted fever, &c. It is very common, however, as a primary diſeaſe in warm climates, and is moſt incident to perſons about the prime or vigour of life. The paſſionate, the ſtudious, and thoſe whoſe nervous ſyſtem is weak, are very liable to it.

CAUSES.——This diſeaſe is often occaſioned by night-watching, eſpecially when joined with hard ſtudy: It likewiſe proceeds from hard drinking, from anger, grief, or anxiety. It may alſo be occaſioned by a ſedentary life, or the ſtoppage of uſual evacuations; as the bleeding piles in men, the cuſtomary diſcharges of women, &c. Such as imprudently expoſe themſelves to the heat of the ſun, eſpecially by ſleeping without doors in a hot ſeaſon, with their heads uncovered, are often ſuddenly ſeized with an inflammation of the brain, ſo as to awake quite delirious. When repellents are imprudently uſed in an eryſipelas, an inflammation of the brain is often the conſequence. It may likewiſe be occaſioned by external injuries, as blows or bruiſes upon the head, &c.

SYMPTOMS.——The ſymptoms which precede a true inflammation of the brain are, pain of the head, redneſs of the eyes, a violent fluſhing of the face, diſturbed ſleep, or a total want of it, great dryneſs of the ſkin, coſtiveneſs, a retention of urine, a ſmall dropping of blood from the noſe, ſinging of the ears, and extreme ſenſibility of the nervous ſyſtem.

When the inflammation is formed, the ſymptoms in general are ſimilar to thoſe of the inflammatory

matory fever. The pulſe indeed is often weak, irregular, and trembling; but ſometimes it is hard and contracted. When the brain itſelf is inflamed, the pulſe is always ſoft and low; but when the inflammation only affects the integuments of the brain, it is hard *. A remarkable quickneſs of hearing is a common ſymptom of this diſeaſe; but that ſeldom continues long. Another uſual ſymptom is a great throbbing or pulſation in the arteries of the neck and temples. The tongue is often black and dry; yet the patient ſeldom complains of thirſt, and even refuſes drink. The mind chiefly runs after ſuch objects as have before made a deep impreſſion upon it; and ſometimes, from a ſullen ſilence, the patient becomes all of a ſudden quite outrageous.

A conſtant trembling and ſtarting of the tendons, is an unfavourable ſymptom, as alſo a ſuppreſſion of urine; a total want of ſleep; a conſtant ſpitting, a grinding of the teeth, which muſt be conſidered as a kind of convulſion. When this diſeaſe ſucceeds an inflammation of the lungs, of the inteſtines, or of the throat, &c. it is owing to a tranſlation of the morbific matter from theſe parts to the brain, and generally proves fatal. Hence we learn the neceſſity of proper evacuations, and the danger of repellents in all inflammatory diſeaſes.

The favourable ſymptoms are, a free perſpiration or ſweating, a copious diſcharge of blood from the noſe, the bleeding piles, a plentiful diſcharge of urine which lets fall a copious ſediment. Sometimes the diſeaſe is carried off by a looſeneſs, and in women by an exceſſive flow of the *menſes*.

As this diſeaſe often proves fatal in a few days,

* This diſtinction is not ſupported by obſervation and experience, nor does it lead to any difference in the method of cure; ſo that it ſeems equally ill founded and unneceſſary.

it requires the moſt ſpeedy applications. When it is prolonged, or improperly treated, it ſometimes ends in madneſs, or a kind of ſtupidity, which continues for life.

In the cure, two things are chiefly to be attended to, viz. to leſſen the quantity of blood in the brain, and to retard the circulation towards the head.

REGIMEN.——The patient ought to be kept very quiet. Company, noiſe, and every thing that affects the ſenſes, or diſturbs the imagination, increaſes the diſeaſe. Even too much light is hurtful; for which reaſon, the patient's chamber ought to be a little darkened, and he ſhould neither be kept too hot nor cold. It is not, however, neceſſary to exclude the company of an agreeable friend, as this has a tendency to ſoothe and quiet the mind. Neither ſhould the patient be kept too much in the dark, leſt it ſhould occaſion a gloomy melancholy, which is too often the conſequence of this diſeaſe.

The patient muſt, as far as poſſible, be ſoothed and humoured in every thing. Contradiction will ruffle his mind, and increaſe his malady. Even when he calls for things which are not to be obtained, or which might prove hurtful, he is not to be poſitively denied them, but rather put off with the promiſe of having them as ſoon as they can be obtained, or by ſome other excuſe. A little of any thing that the mind is ſet upon, though not quite proper, will hurt the patient leſs than a poſitive refuſal. In a word, whatever the patient is fond of, or uſed to be delighted with when in health, may here be tried, as pleaſing ſtories, ſoft muſic, or whatever has a tendency to ſoothe the paſſions, and compoſe the mind. Boerhaave propoſes ſeveral mechanical experiments for this purpoſe; as the ſoft noiſe of water diſtilling by drops into a baſon,

baſon, and the patient trying to reckon them, &c. Any uniform ſound, if low and continued, has a tendency to procure ſleep, and conſequently may be of ſervice.

The aliment ought to be light, of farinaceous ſubſtances; as panado, and water-gruel ſharpened with jelly of currants, or juice of lemons, ripe fruits roaſted or boiled, jellies, preſerves, &c. The drink ſmall, diluting, and cooling; as whey, barley-water or decoctions of barley and tamarinds, which latter not only render the liquor more palatable, but likewiſe more beneficial, as they are of an opening cooling nature.

MEDICINES.——In an inflammation of the brain, nothing more certainly relieves the patient than a free diſcharge of blood from the noſe. When this comes of its own accord, it is by no means to be ſtopped, but promoted, by applying cloths dipped in warm water to the part. When bleeding at the noſe does not happen ſpontaneouſly, it may be provoked by putting a ſtraw, or any other ſharp body up the noſtril.

Bleeding in the temporal arteries greatly relieves the head; but as this operation cannot be generally performed, we would recommend in its ſtead bleeding in the jugular veins. When the patient's pulſe and ſpirits are ſo low, that he cannot bear bleeding with the lancet, leeches may be applied to the temples. Theſe not only draw off the blood more gradually, but by being applied nearer to the part affected, generally give more immediate relief.

A diſcharge of blood from the hæmorrhoidal veins is likewiſe of great ſervice, and ought by all means to be promoted. If the patient has been ſubject to the bleeding piles, and that diſcharge has been ſtopped, every method muſt be tried to reſtore it; as the application of leeches to the parts, ſitting

ſitting over the ſteams of warm water, ſharp clyſters or ſuppoſitories made of honey, aloes, and rock-ſalt.

If the inflammation of the brain be occaſioned by the ſtoppage of any evacuation, either natural or artificial, as the menſes, iſſues, ſetons, or ſuch like, all means muſt be uſed to reſtore it as ſoon as poſſible, or to ſubſtitute ſome other in its ſtead.

The patient's bowels ought to be opened by ſmart purgatives, of calomel, jalap, &c. or if theſe cannot be ſwallowed, ſtimulating clyſters may be frequently thrown up.

Small quantities of nitre ought frequently to be mixed with the patient's drink. Two drams, or more, if the caſe be dangerous, may be uſed every twenty-four hours.

The head ſhould be ſhaven, and frequently rubbed with vinegar, and roſe-water a little warm. Cloths dipped in it may likewiſe be applied to the temples.

If the diſeaſe proves obſtinate, and does not yield to theſe medicines, it will be neceſſary to apply a bliſtering-plaſter to the whole head.

OF THE INFLAMMATION OF THE EYES.

This diſeaſe may be occaſioned by external injuries; as ſtrokes, duſt thrown into the eyes, &c. It is often cauſed by the ſtoppage of cuſtomary evacuations; as the healing of old ſores, drying up of iſſues, or the like. Nothing more certainly brings on an inflammation of the eyes, than the ſuppreſſing of gentle morning ſweats, or the ſweating of the feet. Long expoſure to the night-air, eſpecially in cold northerly wind, or whatever ſuddenly checks the perſpiration, eſpecially after the body

body has been much heated, is very apt to cauſe an inflammation of the eyes. Viewing ſnow or other white bodies for a long time, or looking ſtedfaſtly at the ſun, a clear fire, or any bright object, will likewiſe occaſion this malady. A ſudden tranſition from darkneſs to very bright light will often have the ſame effect.

Nothing more certainly occaſions an inflammation of the eyes than night-watching, eſpecially reading or writing by candle light. Drinking ſpirituous liquors and exceſs of venery, are very hurtful to the eyes. The acrid fumes of metals, and of ſeveral kinds of fuel, are likewiſe very pernicious. Sometimes an inflammation of the eyes proceeds from a venereal taint, and often from a ſcrophulous or gouty habit. It may likewiſe be occaſioned by hairs in the eye lids turning inwards, and hurting the eyes. Sometimes the diſeaſe is epidemic, eſpecially after wet ſeaſons; and I have frequently known it prove infectious, particularly to thoſe who lived in the ſame houſe with the patient. It may be occaſioned by moiſt air, or living in low, damp houſes, eſpecially where people are not accuſtomed to ſuch ſituations. In children, it often proceeds from imprudently drying of ſcabbed heads, a running behind the ears, or any other diſcharge of the ſame nature. Inflammations of the eyes often ſucceed the ſmall-pox or meaſles, eſpecially in children of a ſcrophulous habit.

SYMPTOMS.——An inflammation of the eyes is attended with acute pain, heat, redneſs, and ſwelling. The patient is not able to bear the light, and ſometimes he feels a pricking pain, as if his eyes were pierced with a thorn. Sometimes he imagines his eyes are full of motes, or thinks he ſees flies dancing before him. The eyes are filled with a ſcalding rheum, which ruſhes forth in great quantities whenever the patient attempts to

to look up. The pulſe is generally quick and hard, with ſome degree of fever. When the diſeaſe is violent, the neighbouring parts ſwell, and there is a throbbing or pulſation in the temporal arteries, &c.

A ſlight inflammation of the eyes, eſpecially from an external cauſe, is eaſily cured; but when the diſeaſe is violent, and continues long, it leaves ſpecks upon the eyes, or dimneſs of ſight, and ſometimes total blindneſs.

If the patient be ſeized with a looſeneſs, it has a good effect; and when the inflammation paſſes from one eye to another, as it were by infection, it is no unfavourable ſymptom. When the diſeaſe is accompanied with a violent pain of the head, and continues long, the patient is in great danger of loſing his ſight.

REGIMEN.——The diet, unleſs in ſcrophulous caſes, can hardly be too ſpare, eſpecially at the beginning. The patient muſt abſtain from every thing of a heating nature. His food muſt conſiſt chiefly of mild vegetables, weak broths, and gruels. His drink may be barley-water, balm-tea, common whey, and ſuch like.

The patient's chamber muſt be darkened, or his eyes ſhaded by a green cover, ſo as to exclude the light, but not to preſs upon the eyes. He ſhould not look at a candle, the fire, or any luminous object; and ought to avoid all ſmoak, as the fumes of tobacco, or any thing that may cauſe coughing, ſneezing, or vomiting. He ſhould be kept quiet, avoiding all violent efforts, either of body or mind, and encouraging ſleep as much as poſſible.

MEDICINE.——This is one of thoſe diſeaſes wherein great hurt is done by external applications. Almoſt every perſon pretends to be poſſeſſed of a remedy for the cure of ſore eyes. Theſe remedies generally conſiſt of eye-waters and ointments, with other external applications, which do miſchief

twenty

twenty times for once they do good. People ought therefore to be very cautious how they uſe ſuch things, as the very preſſure upon the eyes often increaſes the malady.

Bleeding, in a violent inflammation of the eyes, is always neceſſary. This ſhould be performed as near the part affected as poſſible. An adult may loſe ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency of the ſymptoms. If it be not, however, convenient to bleed in the neck, the ſame quantity may be let from the arm, or any other part of the body.

Leeches are often applied to the temples, or under the eyes, with good effect. The wounds muſt be ſuffered to bleed for ſome hours, and if the bleeding ſtop ſoon, it may be promoted by the application of cloths dipt in warm water. In obſtinate caſes, it will be neceſſary to repeat this operation ſeveral times *.

Opening and diluting medicines are by no means to be neglected. The patient may take a ſmall doſe of Glauber's ſalts and cream of tartar, every ſecond or third day, or a decoction of tamarinds with ſenna. If theſe be not agreeable, gentle doſes of rhubarb and nitre, a little of the lenitive electuary, or any other mild purgative, will anſwer the ſame end. The patient at the ſame time muſt drink freely of water gruel, tea, or any other weak diluting liquor. He ought likewiſe to take, at bed-time, a large draught of very weak wine-whey, in order to promote perſpiration. His feet and legs muſt frequently be bathed in lukewarm water, and his head ſhaved twice or thrice a-week, and

* The moſt effectual remedy is to ſcarify the eyes, or to divide the turgid blood-veſſels, with the ſhoulder of a ſmall lancet. As a topical application too, a waſh formed by diſſolving from two to five grains, according to circumſtances, of white vitriol, or of alum, in the ounce of water, may be frequently had recourſe to with much advantage; eſpecially after bleeding has been premiſed.

and afterwards waſhed in cold water. This has often a remarkably good effect.

After theſe evacuations have been continued for ſome time, if the inflammation does not yield to them, bliſtering-plaſters muſt be applied behind the ears, to the temples, or upon the neck, and kept open for ſome time by the mild bliſtering ointment. I never knew theſe, if long enough kept open, fail to remove the moſt obſtinate inflammation of the eyes; but, for this purpoſe, it is often neceſſary to continue the diſcharge for ſeveral weeks.

When the diſeaſe has been of long ſtanding, I have ſeen very extraordinary effects from a ſeton in the neck, or betwixt the ſhoulders, eſpecially the latter. It ſhould be put upwards and downwards, or in the direction of the ſpine, and in the middle between the ſhoulder-blades. It may be dreſſed twice a-day with yellow baſilicon. I have known patients, who had been blind for ſeveral months, recover ſight by means of a ſeton betwixt the ſhoulders. When the ſeton is put acroſs the neck, it ſoon wears out, and is both more painful and troubleſome than between the ſhoulders; beſides, it leaves a diſagreeable mark, and does not diſcharge ſo freely.

When the heat and pain of the eyes is very great, a ſoft poultice of bread and milk, with plenty of ſweet oil or freſh butter, may be applied to them, at leaſt all night; and they may be bathed with lukewarm milk and water every morning.

If the patient cannot ſleep, which is ſometimes the caſe, he muſt take ten or twelve drops of laudanum, or two ſpoonfuls of the ſyrup of poppies, over night, more or leſs according to his age, or the violence of the ſymptoms.

After the inflammation is gone off, if the eyes ſtill

ſtill remain weak and tender, they may be bathed every night and morning with cold water and a little brandy, ſix parts of the former to one of the latter. A method ſhould be contrived by which the eye can be quite immerſed in the brandy and water, where it ſhould be kept for ſome minutes. I have generally found this as good a ſtrengthener of the eyes as any of the moſt celebrated collyriums.

When an inflammation of the eyes proceeds from a ſcrophulous habit, it generally proves very obſtinate. In this caſe the patient's diet muſt not be too low, and he may be allowed to drink ſmall negus, or now and then a glaſs of wine. The moſt proper medicine is the Jeſuits bark, which may either be given in ſubſtance, or prepared in the following manner:

Take an ounce of Jeſuits bark in powder, with two drams of Winter's bark, and boil them in an Engliſh quart of water to a pint; when it has boiled nearly long enough, add half an ounce of liquorice root ſliced. Let the liquor be ſtrained. Two, three, or four table-ſpoonfuls, according to the age of the patient, may be taken three or four times a-day. It is impoſſible to ſay, how long this medicine ſhould be continued, as the cure is ſooner performed in ſome than others; but in general, it requires a conſiderable time to produce any laſting effects.

Dr Cheyne ſays, "That æthiops mineral never fails in inflammations of the eyes, even ſcrophulous ones, if given in a ſufficient doſe, and perſiſted in for a ſufficient time." Both this and other mercurial preparations, are no doubt proper when the diſeaſe proves obſtinate; more eſpecially when there is reaſon to ſuſpect, that it may proceed from a venereal taint; but as theſe medicines can never be ſafely adminiſtered, unleſs under the direction of

of a phyſician, we ſhall omit ſpecifying their particular doſes, &c.

It will be proper frequently to look into the eyes, to ſee if any hairs be turned inwards, or preſſing upon them, in order that they may be pulled out without delay.

Such as are liable to frequent returns of this diſeaſe, ought conſtantly to have an iſſue in one or both arms. Bleeding or purging in the ſpring and autumn, will be very beneficial to ſuch perſons. They ought likewiſe to live regularly, avoiding ſtrong liquor, and every thing of a heating quality. Above all, let them avoid the night-air and late ſtudies.

OF THE QUINSEY, OR INFLAMMATION OF THE THROAT.

This diſeaſe is very common in Britain, and is frequently attended with great danger. It prevails in the winter and ſpring, and is moſt fatal to young people of a ſanguine or plethoric habit.

CAUSES.——In general it proceeds from the ſame cauſes as other inflammatory affections, viz. an obſtructed perſpiration, or whatever heats or inflames the blood. An inflammation of the throat is often occaſioned by omitting ſome part of the covering uſually worn about the neck, by drinking cold liquor when the body is warm, by riding or walking againſt a cold northerly wind, or any thing that greatly cools the throat, and parts adjacent. It may likewiſe proceed from the neglect of bleeding, purging, or any cuſtomary evacuation.

Singing,

Singing, ſpeaking loud and long, or whatever ſtrains the throat, may likewiſe cauſe an inflammation of that organ. I have often known the quinſey prove fatal to jovial companions, when, after ſitting long in a warm room, drinking hot liquors, and ſinging with vehemence, they were ſo imprudent as afterwards to go abroad in the cold night-air. Sitting with wet feet, or keeping on wet clothes, are very apt to occaſion this malady. It is likewiſe frequently occaſioned by continuing long in a moiſt place, ſleeping in a damp bed, ſitting in a room that has been newly plaſtered, &c. I know people who never fail to complain of their throat after ſitting but a very ſhort while in a room that has been lately waſhed.

Acrid or irritating food may likewiſe inflame the throat, and occaſion a quinſey. It may alſo proceed from bones, pins, or other ſharp ſubſtances, ſticking in the throat, or from the cauſtic fumes of metals or minerals, as arſenic, antimony, &c. taken in by the breath. This diſeaſe is ſometimes epidemic and infectious.

SYMPTOMS.——The inflammation of the throat is evident from inſpection, the parts appearing red and ſwelled; beſides, the patient complains of pain in ſwallowing any thing. His pulſe is quick and hard, with other ſymptoms of a fever. If blood be let, it is generally covered with a tough coat of a whitiſh colour, and the patient ſpits a tough phlegm. As the ſwelling and inflammation increaſe, the breathing and ſwallowing become more difficult, the pain affects the ears; the eyes generally appear red, and the face ſwells. The patient is often obliged to keep himſelf in an erect poſture, being in danger of ſuffocation; there is a conſtant nauſea, or inclination to vomit; and the drink, inſtead of paſſing into the ſtomach, is often returned by the noſe. The patient is frequently

ſtarved at laſt, merely from an inability of ſwallowing any kind of nouriſhment. When the breathing is performed with a hiſſing noiſe, and the pulſe begins to intermit, death is at hand.

As ſeveral of the organs neceſſary for life are affected by this diſeaſe, it can never be without danger; no time, therefore, ſhould be loſt in attempting to remove it, as a little delay often renders it incurable.

When the breathing is laborious, with ſtraitneſs of the breaſt and anxiety, the danger is great. Though the pain of ſwallowing be very great, yet while the patient breathes eaſy, there is not ſo much danger. An external ſwelling is no unfavourable ſymptom; but if it ſuddenly falls, and the morbific matter is thrown upon the breaſt, the danger is very great. When a quinſey is the conſequence of ſome other diſeaſe, which has already weakened the patient, his ſituation is dangerous. A frothing at the mouth, with a ſwelled tongue, a pale ghaſtly countenance, and coldneſs of the extremities, are fatal ſymptoms.

REGIMEN.——The regimen in this diſeaſe is in all reſpects the ſame as in the pleuriſy or peripneumony. The food muſt be light, and in ſmall quantity, and the drink plentiful, weak, and diluting, mixed with acids.

It is highly neceſſary in this diſeaſe, that the patient be kept eaſy and quiet. Violent paſſions of the mind, or great efforts of the body, may prove fatal. He ſhould not even attempt to ſpeak but in a low voice. Such a degree of warmth as to promote a conſtant gentle ſweat is proper. When the patient is in bed, his head ought to be raiſed a little higher than uſual.

It is peculiarly neceſſary that the throat be kept warm; for which purpoſe ſeveral folds of ſoft flannel may be wrapt round the neck: That alone will often

often remove a ſlight complaint of the throat, eſpecially if applied in due time. We cannot here omit obſerving the propriety of a cuſtom which prevails amongſt the peaſants of this country. When they feel any uneaſineſs of the throat, they wrap a ſtocking about it all night. So effectual is this remedy, that in many places it paſſes for a charm, and the ſtocking is applied with particular ceremonies: The cuſtom, however, is undoubtedly a good one, and ſhould never be neglected. When the throat has been thus wrapt up all night, it muſt not be expoſed to the cold air through the day, but a handkerchief, or a piece of flannel, kept about it till the inflammation be gone.

The jelly of black currants is a medicine very much in eſteem for complaints of the throat; and may indeed be uſed in ſlight attacks with ſome advantage. It ſhould be almoſt conſtantly kept in the mouth, and ſwallowed down leiſurely. It may likewiſe be mixed in the patient's drink, or taken any other way. When it cannot be obtained, the red currant-jelly, or the mulberry, may be uſed in its ſtead.

Gargles for the throat are likewiſe very beneficial. They may be made by adding to half an Engliſh pint of the pectoral decoction before mentioned, two or three ſpoonfuls of honey, and the ſame quantity of currant-jelly. This may be uſed three or four times a-day; and if the patient be troubled with tough viſcid phlegm, the gargle may be made more ſharp and cleanſing, by adding to it a tea-ſpoonful of the ſpirits of *ſal ammoniac*. Some recommend gargles made of a decoction of the leaves or bark of the black-currant buſh; but where the jelly can be had, theſe are unneceſſary.

There is no diſeaſe wherein the benefits of bathing the feet and legs in lukewarm water are more apparent: That practice ought therefore never to

be neglected. If people were careful to keep warm, to wrap up their throats with flannel, to bathe their feet and legs in warm water, and to use a spare diet, with diluting liquors, at the beginning of this disease, it would seldom proceed to any great height, or be attended with any danger; but when these precautions are neglected, and the disease becomes violent, more powerful medicines are necessary.

MEDICINE.——An inflammation of the throat being one of the most acute and dangerous distempers, which sometimes takes off the patient in a short space of time, the most early remedies are with the greatest care and diligence to be administered. In the very first attack, therefore, when it is violent, it will be proper to bleed in the arm, or rather in the jugular vein, and to repeat the operation if the symptoms require.

The belly should likewise be gently opened. This may either be done by giving the patient, for his ordinary drink, a decoction of figs and tamarinds, or small doses of rhubarb and nitre, as recommended in a former part of the work. These may be increased according to the age of the patient, and repeated till they have the desired effect.

I have often known very good effects from a bit of *sal prunel*, or purified nitre, held in the mouth, and swallowed down as it melted. This promotes the discharge of *saliva*, by which means it answers the end of a gargle, while at the same time it cools the blood, by promoting the discharge of urine, &c.

The throat ought likewise to be rubbed twice or thrice a-day with a little of the volatile liniment. This may be made by taking an ounce of oil of sweet almonds, and half an ounce of spirit of hartshorn, and shaking them together in a vial till they be united. I do not remember ever to have seen

this

this fail to produce ſome good effects. The throat ſhould be carefully covered with wool or flannel, to prevent the cold from penetrating the ſkin, as this application renders it very tender. Many other external applications are recommended in this diſeaſe, as a ſwallow's neſt, poultices made of the fungus called Jews ears, &c. But as we do not look upon any of theſe to be preferable to a common poultice of bread and milk, we ſhall take no further notice of them.

Bliſtering upon the neck or behind the ears, in violent inflammation of the throat, is very beneficial. After the plaſters are taken off, the parts ought to be kept running by the application of ſharp ointment, till the inflammation is gone; otherwiſe, upon their drying up, the patient will be in danger of a relapſe.

When the patient has been treated as above, a ſuppuration ſeldom happens. This, however, is ſometimes the caſe in ſpite of all our endeavours to prevent it. When the inflammation and ſwelling continue, and it is evident that a ſuppuration will enſue, it ought to be promoted by drawing the ſteam of warm water into the throat through a funnel, or the like. Soft poultices ought likewiſe to be applied outwardly, and the patient may keep a roaſted fig conſtantly in his mouth.

It ſometimes happens, before the tumor breaks, that the ſwelling is ſo great, as entirely to prevent any thing from getting down into the ſtomach. In this caſe, the patient muſt inevitably periſh, unleſs he can be ſupported in ſome other way. This can only be done by nouriſhing clyſters of broth, or gruel with milk, &c. Patients have often been ſupported by theſe for ſeveral days, till the tumor has broke; and afterwards they have recovered.

Not only the paſſage of the food, but the breath-

ing is often prevented by the tumor. In this caſe nothing can ſave the patient's life, but opening the *trachea* or wind-pipe. That has been ſo often done with ſucceſs, that no perſon, in ſuch deſperate circumſtances, ought to heſitate a moment about the operation; but as it can only be performed by a ſurgeon, it is not neceſſary here to give any directions about it.

When a difficulty of ſwallowing is not attended with an acute pain or inflammation, it is generally owing to an obſtruction of the glands about the throat, and only requires that the part be kept warm, and the throat frequently gargled with ſomewhat that may gently ſtimulate the glands; as a decoction of figs with vinegar and honey; to which may be added a little muſtard, or a ſmall quantity of ſpirits *. But this kind of gargle is never to be uſed where there are ſigns of an inflammation. This ſpecies of *angina* has various names among the common people, as the *pap of the throat*, the falling down of the *almonds of the ears*, &c. Accordingly, to remove it, they pull the patient up by the hair of the head, and thruſt their fingers under his jaws, &c.; all which practices are at beſt uſeleſs, and often hurtful.

Thoſe who are ſubject to inflammations of the throat, in order to prevent too great a fulneſs of blood and other humours, ought to live temperately. Such as do not chuſe to obſerve this rule, muſt have frequent recourſe to purging and other evacuations, to diſcharge the ſuperfluous humours. They ought likewiſe to beware of catching cold, and ſhould abſtain from aliment and medicines of an aſtringent or ſtimulating nature.

Violent

* An infuſion of red roſes, in the proportion of about two drams to the pound of boiling water, with twenty drops of vitriolic acid, makes a common as well as a uſeful gargle, in the ſlighter attacks of this diſeaſe.

Violent exercise, by increasing the motion and force of the blood, is apt to occasion an inflammation of the throat, especially if cold liquor be drank immediately after it, or the body suffered suddenly to cool. Those who would avoid this disease ought therefore, after speaking aloud, singing, running, drinking warm liquor, or doing any thing that may strain the throat, or increase the circulation of the blood towards it, to take care to cool gradually, and to wrap plenty of coverings about their necks, &c.

I have often known persons who had been subject to sore-throats, kept entirely free from that complaint by only wearing a ribband, or a bit of flannel, constantly about their necks, or by wearing a pair of thicker shoes, &c. These may seem trifling, but they have great effect. There is danger indeed in leaving them off after persons have been accustomed to them; but surely the inconveniency of using such things for life is not to be compared with the danger which may attend the neglect of them.

OF THE MALIGNANT QUINSEY, OR PUTRID, ULCEROUS SORE THROAT.

This kind of quinsey is but little known in the northern parts of Britain, though for some time past it has been very fatal in the more southern counties. Children are more subject to it than adults, females than males, and the delicate than those who are hardy and robust. It prevails most in autumn, or after a long course of damp or sultry weather.

CAUSE.——This is evidently a contagious diſtemper, and is generally communicated by infection. Whole families, and even entire villages, often receive the infection from one perſon. This ought to put people upon their guard againſt going near ſuch patients as labour under the diſorder; as by that means they endanger not only their own lives, but likewiſe thoſe of their friends and connections.

SYMPTOMS.——It begins with alternate fits of ſhivering and heat. The pulſe is quick, but low and unequal, and generally continues ſo through the whole courſe of the diſeaſe. The patient complains greatly of weakneſs and oppreſſion of the breaſt; his ſpirits art low, and he is apt to faint away when ſet upright; he is troubled with a nauſea, and often with a vomiting or purging. The two latter are moſt common in children. The eyes appear red and watery, and the face ſwells. The urine is at firſt pale and crude; but, as the diſeaſe advances, it turns more of a yellowiſh colour. The tongue is white, and generally moiſt, which diſtinguiſhes this from an inflammatory diſeaſe. Upon looking into the throat, it appears ſwelled, and of a florid red colour. Pale or aſh-coloured ſpots, however, are here and there interſperſed, and ſometimes one broad patch or ſpot, of an irregular figure, and pale white colour, ſurrounded with florid red, only appears. Theſe whitiſh ſpots or ſloughs cover ſo many ulcers underneath.

An efflorescence, or eruption upon the neck, arms, breaſt, and fingers, about the ſecond or third day, is a common ſymptom of this diſeaſe. When it appears, the purging and vomiting generally ceaſe.

There is often a ſlight degree of delirium, and the face frequently appears blotted, and the in-

ſide

fide of the noſtrils red and inflamed. The patient complains of a diſagreeable putrid ſmell, and his breath is very offenſive.

The putrid, ulcerous ſore throat, may be diſtinguiſhed from the inflammatory by the vomiting and looſeneſs with which it is generally uſhered in; by the foul ulcers in the throat, covered with a white or livid coat; and by the exceſſive weakneſs of the patient; with other ſymptoms of a putrid fever.

Unfavourable ſymptoms are, an obſtinate purging, extreme weakneſs, dimneſs of the ſight, a livid or black colour of the ſpots, and frequent ſhiverings, with a weak, fluttering pulſe. If the eruption upon the ſkin ſuddenly diſappear, or become of a livid colour, with a diſcharge of blood from the noſe or mouth, the danger is very great.

If a gentle ſweat break out about the third or fourth day, and continue with a ſlow, firm, and equal pulſe; if the ſloughs caſt off in a kindly manner, and appear clean and florid at the bottom; and if the breathing be ſoft and free, with a lively colour of the eyes; there is reaſon to hope for a ſalutary criſis.

REGIMEN.——The patient muſt be kept quiet, and for the moſt part in bed, as he will be apt to faint when taken out of it. His food muſt be nouriſhing and reſtorative; as ſago-gruel, with red wine, jellies, broths, &c. His drink ought to be generous, and of an antiſeptic quality; as red wine negus, white-wine whey, and ſuch like.

MEDICINE.——The medicine in this kind of quinſey is entirely different from that which is proper in the inflammatory. All evacuations, as bleeding, purging, &c. which weaken the patient, muſt be avoided. Cooling medicines, as nitre and cream of tartar, are likewiſe hurtful. Strengthening cordials

dials alone can be uſed with ſafety; and theſe ought never to be neglected.

If, at the beginning, there be a great nauſea, or inclination to vomit, the patient muſt drink an infuſion of green tea, camomile flowers, or *carduus benedictus*, in order to clean the ſtomach. If theſe be not ſufficient, he may take a few grains of the powder of ipecacoanha, or any other gentle vomit.

If the diſeaſe be mild, the throat may be gargled with an infuſion of ſage and roſe-leaves, to a gill of which may be added a ſpoonful or two of honey, and as much vinegar as will make it agreeably ſharp; but when the ſymptoms are urgent, the ſloughs large and thick, and the breath very offenſive, the following gargle may be uſed.

To ſix or ſeven ounces of the pectoral decoction, when boiling, add half an ounce of contrayerva root; let it boil for ſome time, and afterwards ſtrain the liquor; to which add two ounces of white-wine vinegar, an ounce of fine honey, and an ounce of the tincture of myrrh. This ought not only to be uſed as a gargle, but a little of it ſhould frequently be injected with a ſyringe, to clean the mouth, before the patient takes any meat or drink. This method is peculiarly neceſſary for children, who cannot uſe a gargle *.

It will be of great benefit if the patient frequently receives into his mouth, through an inverted funnel, the ſteams of warm vinegar, myrrh, and honey.

When the putrid ſymptoms run high, and the diſeaſe is attended with danger, the only medicine that can be depended upon is the Jeſuits bark. It may be taken in ſubſtance, if the patient's ſtomach

* An infuſion of the bark ſtrongly impregnated with vitriolic acid, makes an excellent gargle upon ſuch an occaſion.

mach will bear it. If not, an ounce of bark groſsly powdered, with two drams of Virginian ſnake-root, may be boiled in an Engliſh pint and half of water, to half a pint; to which a tea-ſpoonful of the elixir of vitriol may be added, and an ordinary tea-cupful of it taken every three or four hours. Bliſtering-plaſters are very beneficial in this diſeaſe, eſpecially when the patient's pulſe and ſpirits are low. They may be applied to the throat, behind the ears, or upon the back-part of the neck.

Should the vomiting prove troubleſome, it will be proper to give the patient two table-ſpoonfuls of the ſaline julep, every two hours, or oftener if neceſſary. Tea made of mint and a little cinnamon, will likewiſe be a proper drink, eſpecially if an equal quantity of red wine be mixed with it.

In caſe of a violent looſeneſs, the ſize of a nutmeg of *diaſcordium*, or the japonic confection, may be taken two or three times a-day, or oftener if neceſſary; and the patient's drink muſt be red wine negus.

If a diſcharge of blood from the noſe happens, the ſteams of warm vinegar may be received up the noſtrils frequently; and the drink may be ſharpened with ſpirits of vitriol, or tincture of roſes.

In caſe of a ſtrangury, the belly muſt be fomented with warm water, and emollient clyſters given three or four times a-day.

After the violence of the diſeaſe is over, the belly ſhould be opened with mild purgatives; as manna, ſenna, rhubarb, or the like.

If great weakneſs and dejection of ſpirits, or night-ſweats, with other ſymptoms of a conſumption, ſhould remain after this diſeaſe, we would recommend it to the patient to continue the uſe of the Jeſuits bark, with the elixir of vitriol, and to take frequently a glaſs of generous wine. Theſe, together

together with a milk-diet, and riding on horſe-back, are the moſt likely means for recovering his ſtrength.

OF COLDS.

It has already been obſerved, that colds are the effect of an obſtructed perſpiration; the common cauſes of which we have likewiſe endeavoured to point out, and ſhall not here repeat them. Neither ſhall we ſpend time in enumerating all the various ſymptoms of colds, as they are pretty generally known. It may not, however, be amiſs to obſerve, that almoſt every cold is a kind of fever, and only differs in degree from ſome of thoſe which have already been treated of.

No age, ſex, nor conſtitution, is exempted from this diſeaſe; neither is it in the power of medicine to prevent it. The inhabitants of every climate are liable to catch cold; nor can even the greateſt circumſpection defend them againſt its attacks. Indeed, if the human body could be kept conſtantly in an uniform degree of warmth, ſuch a thing as catching cold would be impoſſible: But as that cannot be effected by any means, the perſpiration muſt be liable to many changes. Such changes, however, when ſmall, do not affect the health; but, when exceſſive, they muſt prove hurtful. Hence the great ſecret of preventing colds, lies in avoiding, as far as poſſible, all extremes either of heat or cold, and eſpecially all ſudden changes from one extreme to another.

When oppreſſion of the breaſt, a ſtuffing of the noſe, unuſual wearineſs, or a pain of the head, &c. give

give ground to believe that the perſpiration is obſtructed, or, in other words, that the perſon has caught cold, he ought immediately to leſſen his diet, at leaſt the uſual quantity of his ſolid food, and to abſtain from all ſtrong liquors. Inſtead of fleſh, fiſh, eggs, milk, and other nouriſhing diet, he may eat light bread-pudding, veal or chicken-broth, paps or gruels, and ſuch like. His drink may be water-gruel ſweetened with a little honey; an infuſion of balm, or linſeed ſharpened with the juice of orange or lemon; a decoction of barley and liquorice with tamarinds, or any other cool, diluting, acid liquor.

Above all, his ſupper ſhould be light; as ſmall poſſet, or water-gruel ſweetened with honey, and a little toaſted bread in it. If honey ſhould diſagree with the ſtomach, the gruel may be ſweetened with treacle or coarſe ſugar, and ſharpened with the jelly of currants. Thoſe who have been accuſtomed to generous liquors may take white-wine whey inſtead of gruel, which may be ſweetened as above.

The patient ought to lie longer than uſual a-bed, and to encourage a gentle ſweat, which is eaſily brought on towards morning, by drinking tea, or any kind of warm diluting liquor. I have often known this practice, in a day or two, carry off a cold, which, in all probability, had it been neglected, would have coſt the patient his life, or have confined him for ſome months to his bed. Would people ſacrifice a little time to eaſe and warmth, and practiſe a moderate degree of abſtinence when the firſt ſymptoms of a cold appear, we have reaſon to believe, that moſt of the bad effects which flow from an obſtructed perſpiration might be prevented. But after the diſeaſe has gathered ſtrength by delay, all attempts to remove it often prove in vain. A pleuriſy, a peripneumony,

mony, or a fatal conſumption of the lungs, are the common effects of colds that have either been totally neglected, or treated improperly.

Many attempt to cure a cold, by getting drunk. But this, to ſay no worſe of it, is a very hazardous and fool-hardy experiment. No doubt it may ſometimes ſucceed, by ſuddenly reſtoring the perſpiration; but when there is any degree of inflammation, which is frequently the caſe, ſtrong liquors, inſtead of removing the malady, will increaſe it. By this means a common cold is often converted into an inflammatory fever.

When thoſe who labour for their daily bread have the misfortune to catch cold, they grudge to loſe a day or two, in order to keep themſelves warm, and take a little medicine, by which means the diſorder is often ſo aggravated as to confine them for a long while, or even to render them ever after unable to ſuſtain hard labour. Such of the labouring poor as can afford to take care of themſelves, are often too hardy to do it; they affect to deſpiſe colds, and as long as they can crawl about, ſcorn to be confined by what they call a *common cold*. Hence it comes to paſs that colds deſtroy ſuch numbers of mankind. Like an enemy deſpiſed, they gather ſtrength from delay, till at length they become invincible. We often ſee this verified in travellers, who, rather than loſe a day in the proſecution of their buſineſs, throw away their lives, by purſuing their journey with this diſeaſe upon them, even in the coldeſt ſeaſon.

But colds may be too much as well as too little indulged. When a perſon, for a ſlight cold, ſhuts himſelf up in a warm room, and drinks great quantities of warm liquor, it may bring on ſuch a general relaxation of the ſolids as will not be eaſily removed. It will therefore be proper, when the diſeaſe will permit, and the weather is mild, to

join

join to the regimen mentioned above, gentle exercife; as walking, riding on horfeback, or in a machine, &c. An obftinate cold, which no medicine can remove, will yield to a proper courfe of exercife, when duly perfifted in.

Bathing the feet and legs every night in warm water has a great tendency to reftore the perfpiration. But care muft be taken that the water be not too warm, otherwife it will do hurt. It fhould never be warmer than new milk, and the patient fhould go immediately to bed after ufing it. Bathing the feet in warm water, lying in bed, and drinking warm water-gruel, or other weak liquors, will fooner take off a fpafm, and reftore the perfpiration, than all the hot fudorific medicines in the world. This is all that is neceffary for removing a common cold; and if this courfe be taken at the beginning, and purfued for a few days, it will feldom fail.

But when the fymptoms do not yield to abftinence, warmth, and diluting liquors, there is reafon to fear the approach of fome other difeafe, as an inflammation of the breaft, an ardent fever, &c. If the pulfe, therefore, be hard and frequent, the fkin hot and dry, and the patient complain of his head and breaft, &c. it will be neceffary to bleed, and to give the cool opening powders mentioned when treating on fcarlet fever, every three or four hours, till they give a ftool.

It will likewife be proper to put a blifter-plafter on the back, to give two table-fpoonfuls of the faline mixture every three hours, and, in fhort, to treat the patient in all refpects as for a flight fever. I have often feen this courfe, when obferved at the beginning, remove the complaint in two or three days, when the patient had all the fymptoms of an approaching ardent fever, or an inflammation of the breaft.

OF

OF COUGHS.

A COUGH is generally the effect of a cold, which has either been improperly treated, or entirely neglected. When it proves obſtinate, there is always reaſon to fear the conſequences, as this ſhews a weak ſtate of the lungs, and is often the forerunner of a conſumption.

If the cough be violent, and the patient young and ſtrong, with a hard quick pulſe, bleeding will be neceſſary; but in weak and relaxed habits, bleeding rather prolongs the diſeaſe. When the patient ſpits freely, bleeding is unneceſſary, and ſometimes hurtful, as it tends to leſſen that diſcharge.

When the cough is not attended with a fever, and the ſpittle is viſcid and tough, ſharp pectoral medicines are to be adminiſtered; as gum-ammoniac, ſquills, &c. The ſolution of gum-ammoniac may be prepared as directed in a former part of this work, and two table-ſpoonfuls of it taken three or four times a day, more or leſs, according to the age and conſtitution of the patient. Squills may be given various ways; two ounces of the vinegar, the oxymel, or the ſyrup, may be mixed with the ſame quantity of cinnamon-water, to which may be added an ounce of common water, and an ounce of balſamic ſyrup. Two table-ſpoonfuls of this mixture may be taken three or four times a-day.

A ſyrup made of equal parts of lemon-juice, honey, and ſugar-candy, is likewiſe very proper in this kind of cough. A table-ſpoonful of it may be taken at pleaſure.

When the defluxion is ſharp and thin, theſe medicines rather do hurt. In this caſe, gentle opiates, oils, and mucilages, are proper. A cup of the infuſion of wild-poppy leaves, with marſh-mallow-roots,

roots, or the flowers of colts-foot, may be taken frequently; or a tea-ſpoonful of the paragoric elixir may be put into the patient's drink twice a-day. He may likewiſe take an emulſion made of an ounce and a half of olive-oil, ſix ounces of water, one ounce of pectoral ſyrup, and a tea-ſpoonful of ſpirit of hartſhorn. Theſe muſt be well ſhaken together, and two table-ſpoonfuls of the mixture taken every three or four hours. Fuller's Spaniſh infuſion is alſo a very proper medicine in this caſe, and may be taken, if the above ſhould diſagree with the patient's ſtomach. It is made by infuſing in an Engliſh quart of boiling water, two drams of ſalt of tartar, half a dram of ſaffron cut into ſmall pieces, and an ounce of Spaniſh juice likewiſe cut ſmall. Theſe muſt ſtand in a cloſe veſſel for twenty-four hours, in a gentle degree of warmth. Afterwards let the infuſion be ſtrained, and a tea-cupful of it taken three or four times a-day.

When a cough is occaſioned by acrid humours tickling the throat and *fauces*, the patient ſhould keep ſome ſoft pectoral lozenges almoſt conſtantly in his mouth; as the Pontefract liquorice cakes, barley-ſugar, the Spaniſh juice, &c. Theſe blunt the acrimony of the humours, and, by taking off their ſtimulating quality, help to appeaſe the cough.

In obſtinate coughs, proceeding from a flux of humours upon the lungs, it will often be neceſſary, beſides expectorating medicines, to have recourſe to iſſues, ſetons, or ſome other drain. In this caſe I have always obſerved the moſt happy effects from a Burgundy-pitch plaſter applied between the ſhoulders. I have ordered this ſimple remedy in the moſt obſtinate coughs, in a great number of caſes, and in many different conſtitutions, without ever knowing it fail, unleſs where there are evident ſigns of an ulcer in the lungs. About the bulk of a nutmeg of Burgundy-pitch may be ſpread

thin upon a piece of ſoft leather, about the ſize of the hand, and laid between the ſhoulder-blades. It may be taken off and wiped every three or four days, and ought to be renewed once a-fortnight or three weeks. This is indeed a cheap and ſimple medicine, and conſequently apt to be deſpiſed; but we will venture to affirm, that the whole *materia medica* does not afford an application more efficacious in almoſt every kind of cough. It has not indeed an immediate effect; but, if continued long enough, it will ſucceed where moſt other medicines fail.

The only inconveniency attending this plaſter is the itching, which it occaſions in the part to which it is applied; but ſurely this may be diſpenſed with, conſidering the advantage which the patient may expect to reap from the application; beſides, when the itching becomes very uneaſy, the plaſter may be taken off, and the part rubbed with a dry cloth, or waſhed with a little warm milk and water. Some caution, indeed, is neceſſary in diſcontinuing the uſe of ſuch a plaſter; this, however, may be ſafely done by making it ſmaller by degrees, and at length quitting it altogether in a warm ſeaſon.

But coughs proceed from many other cauſes beſides defluxions upon the lungs. In theſe caſes the cure is not to be attempted by pectoral medicines. Thus, in a cough proceeding from a foulneſs and debility of the ſtomach, ſyrups, oils, mucilages, and all kind of balſamic medicines, do hurt. This cough may be known from one that is owing to a fault in the lungs by this, that in the latter the patient coughs whenever he inſpires, or draws in his breath fully; but in the former that does not happen.

The cure of this cough depends chiefly upon cleanſing and ſtrengthening the ſtomach; for which purpoſe gentle vomits and bitter purgatives are moſt

moſt proper. Thus, after a vomit or two, the ſacred tincture, as it is called, may be taken for a conſiderable time in the doſe of a table-ſpoonful or two twice a-day, or as often as it is found neceſſary to keep the belly gently open. People may make this tincture themſelves, by infuſing an ounce of *hiera picra* in an Engliſh pint of white wine, letting it ſtand a few days, and then ſtraining it off for uſe.

In coughs which proceed from a debility of the ſtomach, the Jeſuits bark is likewiſe of conſiderable uſe. It may either be chewed, taken in powder, or made into a tincture along with other ſtomachic bitters.

A *nervous cough* can only be removed by change of air, and proper exerciſe; to which may be added the uſe of gentle opiates. A tea-ſpoonful of the paragoric elixir, or two of the ſaponaceous pills, may be taken twice a-day. If theſe prove too weak, ten, fifteen, or twenty drops of liquid laudanum, more or leſs as circumſtances may require, may be taken at bed-time, or when the cough is moſt troubleſome. Putting the feet and hands in warm water will often appeaſe the violence of a nervous cough.

When a cough is only the ſymptom of ſome other malady, it is in vain to attempt to remove it, without firſt curing the diſeaſe from which it proceeds. Thus, when a cough is occaſioned by the cutting of teeth; keeping the belly open, ſcarifying the gums, or whatever facilitates the teething, likewiſe appeaſes the cough. In like manner, when worms occaſion a cough, ſuch medicines as remove theſe will generally cure the cough; as bitter purgatives, oily clyſters, and ſuch like.

Women, during the laſt months of pregnancy, are often greatly afflicted with a cough, which is generally relieved by bleeding, and keeping the

belly open. They ought to avoid all flatulent food, and to wear a loose easy dress.

A cough is not only a symptom, but is often likewise the forerunner of diseases. Thus, the gout is frequently ushered in by a very troublesome cough, which affects the patient for some days before the coming on of the fit. A paroxism of the gout generally removes this cough, which should therefore be promoted, by keeping the extremities warm, drinking warm liquors, and bathing the feet and legs frequently in lukewarm water.

OF THE CHIN-COUGH.

This cough seldom affects adults, but is often epidemical among children. Such children as live upon thin watery diet, who breathe unwholesome air, and have too little exercise, are most liable to this disease, and generally suffer most from it.

The chin cough is so well known, even to nurses, —that no description of it is necessary. Whatever hurts the digestion, obstructs the perspiration, or relaxes the solids, predispose to this disease: Consequently its cure must depend upon cleaning and strengthening the stomach, bracing the solids, and, at the same time, promoting perspiration and the different secretions

The diet in this disease must be light, and of easy digestion; for children, good bread made into pap or pudding, chicken-broth, with other light spoon-meats, are proper; but those who are farther advanced may be allowed sago-gruel, and if the fever be not high, a little boiled chicken, or other

other white meats. The drink may be penny-royal tea, ſweetened with honey or ſugar-candy, ſmall wine-whey; or, if the patient be weak, he may ſometimes be allowed a little negus.

The moſt effectual remedy in this diſeaſe is change of air. This often removes the malady, even when the change ſeems to be from a purer to a leſs wholeſome air. This may in ſome meaſure depend on the patient's being removed from the place where the infection prevails. Moſt of the diſeaſes of children are infectious; nor is it at all uncommon to find the chin-cough prevailing in one town or village, when another, at a very ſmall diſtance, is quite free from it. But, whatever be the cauſe, we are ſure of the fact. No time ought therefore to be loſt in removing the patient to ſome diſtance from the place where he caught the diſeaſe, and, if poſſible, into a more pure and dry air.

When the diſeaſe proves violent, and the patient is in danger of being ſuffocated by the cough, he ought to be bled, eſpecially if there be a fever with a hard full pulſe. But as the chief intention of bleeding is to prevent a rupture of the blood-veſſels of the lungs, and, to render it more ſafe to give vomits, it will ſeldom be neceſſary to repeat the operation; yet if there be ſymptoms of an inflammation of the lungs, a ſecond, or even a third bleeding, may be requiſite *.

It is a favourable ſymptom when the patient vomits after the fit. This cleans the ſtomach, and greatly relieves the cough. It will therefore be proper to promote this diſcharge, either by camomile-tea, or lukewarm water; and when theſe are not ſufficient, ſmall doſes of ipecacoanha may be

* Bliſtering, in this ſituation, may frequently be had recourſe to with advantage: and, beſides the occaſional uſe of full vomiting, as recommended in the next paragraph, naufeating doſes of antimonials ought to be conſtantly adminiſtered.

given. A child of three or four years of age may take five or ſix grains; and to others, leſs or more muſt be given according to their age and ſtrength.

It is very difficult to make children drink after a vomit. I have often ſeen them happily deceived, by infuſing a ſcruple or half a dram of the powder of ipecacoanha in a tea-pot, with half an Engliſh pint of boiling water. If this be diſguiſed with a few drops of milk and a little ſugar, they will imagine it tea, and drink it very greedily. A ſmall tea-cupful of this may be given every quarter of an hour, or rather every ten minutes, till it operate. When they begin to puke, there will be no occaſion for drinking any more, as the water already on their ſtomach will be ſufficient.

Vomits not only clean the ſtomach, which in this diſeaſe is generally loaded with viſcid phlegm, but they likewiſe promote the perſpiration and other ſecretions; and ought therefore to be repeated according to the obſtinacy of the diſeaſe. They ſhould not however be too ſtrong; gentle vomits, frequently repeated, are both leſs dangerous, and more beneficial than ſtrong ones.

As the patient is generally coſtive, it will be proper to keep his belly gently open. The beſt medicines for this purpoſe are rhubarb and its preparations, or the ſacred tincture, if the patient can be brought to take it *. Of this a tea-ſpoonful or two may be given to a young child twice or thrice a-day, as there is occaſion. To ſuch as are farther advanced, the doſe muſt be proportionally increaſed,

* Neither of theſe medicines, we ſhould conceive, are very well ſuited to the intention here propoſed. The firſt, in place of tending to keep the body open, has a direct tendency to produce coſtiveneſs; the laſt we think too heating a medicine to be generally exhibited to children. We would rather prefer a gentle doſe of any of the laxative neutral ſalts, or an infuſion of ſenna and manna, as recommended afterwards.

creaſed, and repeated till it has the deſired effect. Thoſe who cannot be brought to take the bitter tincture, may have an infuſion of ſenna and prunes, ſweetened with manna, coarſe ſugar, or honey; or a few grains of rhubarb mixed with a tea-ſpoonful or two of ſyrup, or currant jelly, ſo as to diſguiſe the taſte. Moſt children are fond of ſyrups and jellies, and ſeldom refuſe even a bitter medicine when mixed with them.

Many people believe, that oily, pectoral, and balſamic medicines, poſſeſs wonderful virtues for the cure of the chin-cough, and accordingly exhibit them plentifully to patients of every age and conſtitution, without conſidering that every thing of this nature muſt load the ſtomach, hurt the digeſtion, and of courſe aggravate the diſorder.

The *millepedes*, or wood-lice, are greatly recommended for the cure of a chin-cough. Thoſe who chuſe to make uſe of theſe inſects, may infuſe two ounces of them bruiſed in an Engliſh pint of ſmall white wine for one night. Afterwards the liquor may be ſtrained through a cloth, and a table-ſpoonful of it given to the patient three or four times a-day.

Opiates are ſometimes neceſſary to allay the violence of the cough. For this purpoſe a little of the ſyrup of poppies, or ten, fifteen, or twenty drops, according to the age of the patient, of the paregoric elixir, may be taken in hyſop or penny-royal tea, three or four times a-day. An adult may take a table-ſpoonful of the ſyrup, or a tea-ſpoonful of the elixir.

The garlic ointment is a well-known remedy in North Britain for the chin-cough. It is made by beating in a mortar, garlic, with an equal quantity of hogs lard, butter, or oil. With this the ſoles of the feet may be rubbed twice or thrice a day, or it may be ſpread thin upon a rag, and applied

as a plaſter. It ſhould be renewed every night and morning at leaſt, as the garlic ſoon loſes its virtue.

This is an exceeding good medicine, both in the chin-cough, and in moſt other coughs of an obſtinate nature. It ought not, however, to be uſed when the patient is very hot or feveriſh, leſt it increaſe theſe ſymptoms.

The feet ſhould be bathed once every two or three days in warm water; and the Burgundy-pitch plaſter, mentioned above, may be applied betwixt the ſhoulders. But when the diſeaſe proves very violent, it will be neceſſary, inſtead of it, to apply a bliſtering-plaſter, and to keep the part open for ſome time with iſſue-ointment.

When the diſeaſe is prolonged, and the patient is free of a fever, the Jeſuits bark, and other bitters, are the moſt proper medicines. The bark may either be taken in ſubſtance, or in a decoction or infuſion, as is moſt agreeable to the patient. For a child, ten, fifteen, or twenty grains, may be given for a doſe, according to the age of the patient. For an adult, half a dram or two ſcruples will be proper. Some give the extract of the bark with cantharides; but to manage this requires ſome ſkill and attention. It is more ſafe to give a few grains of caſtor along with the bark. A child of ſix or ſeven years of age may take ſeven or eight grains of caſtor, with fifteen grains of powdered bark, for a doſe. This may be made into a mixture, with two or three ounces of any ſimple diſtilled water, and a little ſyrup, and taken three or four times a-day.

INFLAM-

INFLAMMATION OF THE STOMACH.

This is a dangerous diſeaſe, and requires the moſt ſpeedy aſſiſtance, as it frequently ends in a ſuppuration; and ſometimes in a mortification, which is certain death.

CAUSES.——It may proceed from any of the cauſes which produce an inflammatory fever; as cold liquor drank while the body is warm, an obſtructed perſpiration, the ſudden ſtriking in of any eruption, &c. It may likewiſe proceed from the acrimony of the bile, or from acrid and ſtimulating ſubſtances taken into the ſtomach; as ſtrong vomits or purges, corroſive poiſons, and ſuch like. When the gout has been repelled from the extremities, either by cold or improper applications, it often occaſions an inflammation of the ſtomach. Hard or indigeſtible ſubſtances taken into the ſtomach, as bones, the ſhells of nuts, &c. have likewiſe that effect.

SYMPTOMS.——It is attended with a fixed pain and burning heat in the ſtomach; great reſtleſſneſs and anxiety; a ſmall, quick, hard pulſe; vomiting, or at leaſt a nauſea and ſickneſs; exceſſive thirſt; coldneſs of the extremities; difficulty of breathing; cold clammy ſweats; and ſometimes convulſions and fainting fits. The ſtomach is ſwelled, and often feels hard to the touch. One of the moſt certain ſigns of this diſeaſe is, the ſenſe of pain which the patient feels upon taking any kind of food or drink, eſpecially if too hot or cold, into his ſtomach.

When the patient vomits every thing he eats or drinks, is extremely reſtleſs, has a hiccup, with an intermitting pulſe, and frequent fainting fits, the danger is very great.

REGI-

REGIMEN.——The patient muſt, with the greateſt care, avoid all acrimonious, heating, and irritating food and drink. His weakneſs may deceive the by-ſtanders, and induce them to give him wines, or other cordials; but all theſe increaſe the diſeaſe, and often occaſion ſudden death. The inclination to vomit may likewiſe impoſe on the attendants, and make them think a vomit neceſſary; but that too is almoſt certain death.

The food muſt be light, thin, cool, and eaſy of digeſtion. It muſt be given in ſmall quantities, and ſhould neither be quite cold nor too hot. Thin gruel made of barley or oat-meal, light toaſted bread diſſolved in boiling water, or very weak chicken-broth, are the moſt proper. The drink ſhould be clear whey, barley-water, or decoctions of emollient vegetables; as liquorice and marſh-mallow-roots, &c.

MEDICINE.——Bleeding in this diſeaſe is abſolutely neceſſary, and is almoſt the only medicine that can be depended on *. When the diſeaſe proves obſtinate, it will often be neceſſary to repeat this operation ſeveral times; nor muſt the low ſtate of the pulſe deter us from doing ſo. The pulſe in this diſeaſe generally riſes upon bleeding, and ſo long as that is the caſe the operation is ſafe.

Frequent fomentations with warm water, or a decoction of emollient vegetables, are likewiſe beneficial. Flannel cloths dipped in theſe muſt be applied to the region of the ſtomach, and removed as they turn cool. They muſt neither be applied too warm, nor ſuffered to continue till they become

* Beſides the general blood-letting here recommended, local bleeding with leeches may often be uſed with advantage, and a bliſter ought never to be neglected where the diſeaſe has not yielded to the above remedies.

come quite cold, as either of theſe extremes would aggravate the diſeaſe.

The feet and legs ought likewiſe to be frequently bathed in lukewarm water, and warm bricks or poultices may be applied to the ſoles of the feet.

The only internal medicines which we ſhall venture to recommend in this diſeaſe, are mild clyſters. Theſe may be made of warm water, or thin water-gruel, and if the patient be coſtive, a little ſweet oil, honey, or manna, may be added. Clyſters anſwer the purpoſe of an internal fomentation, while they keep the belly open, and at the ſame time nouriſh the patient, who is often, in this diſeaſe, unable to retain any thing upon his ſtomach. For theſe reaſons they muſt not be neglected, as the patient's life may depend upon the application of them.

OF THE ILIAC PASSION.

This is one of the moſt painful and dangerous diſeaſes that mankind are liable to. It proceeds from the ſame cauſes as the inflammation of the ſtomach; to which may be added coſtiveneſs, worms, eating unripe fruits, or great quantities of nuts, drinking hard windy malt liquors, as ſtale beer, bottled ale, or ſour wine, cyder, &c. It may likewiſe be occaſioned by a rupture, by ſcirrhous tumours of the inteſtines, or by their oppoſite ſides growing together.

The *ſymptoms* here are nearly the ſame as in the foregoing diſeaſe; only the pain, if poſſible, is more acute, and is ſituate lower down, about the region of the navel. The vomiting is likewiſe more violent,

lent, and ſometimes even the excrements, together with the clyſters and ſuppoſitories, are diſcharged by the mouth. The patient is continually belching up wind, and has often an obſtruction of his urine.

While the pain ſhifts, and the vomiting only returns at certain intervals, and while the clyſters paſs downwards, there is ground to hope; but when the clyſters and *fæces* are vomitted, and the patient is exceeding weak, with a low fluttering pulſe, a pale countenance, and a diſagreeable or ſtinking breath, there is great reaſon to fear, that the conſequences will prove fatal. Clammy ſweats, black fœtid ſtools, with a ſmall intermitting pulſe, and a total ceſſation of pain, are the ſigns of a gangrene, and approaching death.

REGIMEN.——The regimen in this diſeaſe is in general the ſame as in an inflammation of the ſtomach. The patient muſt be kept quiet, avoiding cold, and all violent paſſions of the mind. His food muſt be thin, weak, and given in ſmall quantities; his drink weak and diluting; as clear whey, barley-water, and ſuch like.

MEDICINE.——Bleeding in this, as well as in the inflammation of the ſtomach, is the remedy moſt to be depended on. It ſhould be performed as ſoon as the ſymptoms appear, and muſt be repeated according to the ſtrength of the patient, and the violence of the ſymptoms.

A bliſtering-plaſter applied immediately over the part where the moſt violent pain is, has often a very good effect. Even clyſters, which before had no effect, will operate when the bliſter begins to riſe.

Fomentations and laxative clyſters are by no means to be omitted. The patient's feet and legs ſhould frequently be bathed in warm water; and cloths dipped in it applied to his belly. Bladders filled

filled with warm water may likewiſe be applied to the region of the navel, and warm bricks, or bottles filled with warm water, to the ſoles of the feet. The clyſters may be made of barley-water or thin gruel, and ſoftened with plenty of ſweet oil or freſh butter. Theſe may be adminiſtered every two or three hours, or oftener, if the patient continues coſtive.

If common clyſters have not the deſired effect, we would recommend the ſmoke of tobacco. It may be blown into the bowels through an inverted pipe. This may be repeated after ſome time, unleſs the effect of the firſt renders it unneceſſary.

If the diſeaſe does not yield to clyſters and fomentations, recourſe muſt be had to pretty ſtrong purgatives; but as theſe, by irritating the bowels, often increaſe their contraction, and by that means fruſtrate their own intention, it will be neceſſary to join them with opiates; theſe, by allaying the pain, and relaxing the ſpaſmodic contractions of the guts, greatly aſſiſt the operation of purgatives in this caſe.

What often anſwers the purpoſe of purging very well, is a ſolution of the bitter purging ſalts. Two ounces of theſe may be diſſolved in an Engliſh pint of warm water, or thin gruel, and two or three table-ſpoonfuls given every half hour till it operates. At the ſame time, fifteen, twenty, or twenty-five drops of laudanum may be given in a glaſs of peppermint or ſimple cinnamon-water, to appeaſe the irritation, and prevent the vomiting, &c.

Acids have often a very happy effect in ſtaying the vomiting, and appeaſing the other violent ſymptoms of this diſeaſe. It will therefore be of uſe to ſharpen the patient's drink with cream of tartar, juice of lemon; or, when theſe cannot be obtained, a little vinegar may be added to it.

But

But it often happens that no liquid whatever will ſtay on the ſtomach. In this caſe the patient muſt take purgative pills. I have generally found the following anſwer very well. Take jalap in powder, and vitriolated tartar, each half a dram, opium one grain, Caſtile ſoap, as much as will make the maſs fit for pills. Theſe muſt be taken at one doſe; and if they do not operate in ſix or ſeven hours, the doſe may be repeated.

If a ſtool cannot be procured by any of the above means, it will be neceſſary to immerſe the patient in warm water up to the breaſt. I have often ſeen this ſucceed when other means proved in vain. The patient muſt continue in the water as long as he can eaſily bear it without fainting; and if one immerſion does not ſucceed, it may be repeated after ſome time, when the patient's ſtrength and ſpirits are recruited. It is more ſafe for him to go frequently into the bath, than to continue too long at a time; and it is often neceſſary to repeat it ſeveral times before it has the deſired effect.

It has ſometimes happened, after all other means of procuring a ſtool had been tried in vain, that this was brought about by immerſing the patient's lower extremities in cold water, making him walk upon a wet pavement, and daſhing his legs and thighs with the cold water, &c. This method, when others fail, at leaſt merits a trial. It is indeed attended with ſome danger; but a doubtful remedy is better than none.

In deſperate caſes it is common to give quickſilver. This may be taken to the quantity of ſeveral ounces, or even a pound, but ſhould not exceed that. When there are evident marks of an inflammation, or any reaſon to ſuſpect a mortification of the guts, this medicine ought not to be tried. In that caſe it will only haſten the patient's death. But when the obſtruction is occaſioned by

any

any cauſe that can be removed by force, quick-ſilver is not only a proper medicine, but the beſt that can be applied, as it is the fitteſt body we know for making its way through the inteſtinal canal.

If the diſeaſe proceeds from a rupture, the patient muſt be laid with his head very low, and the inteſtines, if poſſible, returned by gentle preſſure with the hand. If this, with fomentations and clyſters, ſhould not ſucceed, recourſe muſt be had to a ſurgical operation, which may give the patient relief.

Such as would avoid this excruciating and dangerous diſeaſe, muſt take care never to be too long without a ſtool. Some who have died of it have had ſeveral pounds of hard, dry *fæces* taken out of their guts. They ſhould likewiſe beware of eating too freely of ſour or unripe fruits, or drinking ſtale windy liquors, or the like. I have often known it brought on by living too much on baked fruits, which are ſeldom good. It likewiſe proceeds frequently from cold caught by wet clothes, &c. but eſpecially from wet feet.

OF THE COLIC *.

The colic has great affinity, both in its ſymptoms and method of cure, with the two preceding diſeaſes.

* While our Author has here characteriſed the colic and iliac paſſion, as two different diſeaſes, which are now generally allowed to be only different degrees of the ſame complaint; he has, at the ſame time, confounded the firſt of theſe with another diſeaſe, the inflammation of the inteſtines, from which, though they are frequently conjoined,

diſeaſes. It is generally attended with coſtiveneſs and acute pain of the bowels; and requires diluting diet, evacuations, fomentations, &c.

Colics are variouſly denominated according to their cauſes, as the *flatulent*, the *bilious*, the *hyſteric*, the *nervous*, &c. As each of theſe requires a particular treatment, we ſhall point out their moſt general ſymptoms, and the means to be uſed for their relief.

The *flatulent*, or windy-colic, is generally occaſioned by an indiſcreet uſe of unripe fruits, meats of hard digeſtion, windy vegetables, fermented liquors, and ſuch like. It may likewiſe proceed from an obſtructed perſpiration, or catching cold. Delicate people, whoſe digeſtive powers are weak and debilitated, are moſt liable to this kind of colic.

The flatulent colic may either affect the ſtomach or inteſtines. It is attended with a painful ſtretching of the ſtomach, or that part of the bowels where it is lodged. The patient feels a rumbling in his guts, and is generally relieved by a diſcharge of wind, either upwards or downwards. The pain is ſeldom confined to any particular part, as the vapour wanders from one diviſion of the bowels to another, till ſuch time as it finds a vent.

When

conjoined, it ought, as being a different diſeaſe and requiring a ſomewhat different method of treatment, to have been carefully ſeparated. An inflammation of the inteſtines, though it frequently ſupervenes upon colic, yet does not neceſſarily nor conſtantly attend this diſeaſe. In the one, along with the ſharp fixed pain in ſome part of the belly, a degree of fever takes place from the very commencement of the attack; while the other is often without fever, and with no fixed pain in a particular part, but rather a general diſtention and uneaſineſs over the whole belly. In a word, pain and fever are the leading ſymptoms of the firſt, as conſtipation is of the laſt. In the firſt, our chief attention muſt be directed to the inflammation as the primary diſeaſe. This will require preciſely the ſame remedies mentioned in the inflammation of the ſtomach, and which therefore need not to be repeated here. In the other, our method of treatment will in a great meaſure be directed by the cauſe inducing the diſeaſe, as mentioned above.

When the diſeaſe proceeds from windy liquor, eating green fruit, ſour herbs, or the like, the beſt medicine is to take immediately a dram of brandy, gin, or any good ſpirits, and to apply warm cloths to the ſtomach and bowels. The patient ſhould likewiſe ſit with his feet upon a warm hearth-ſtone, or apply warm bricks to them; and he may drink camomile-tea or water-gruel, with as much pepper in it as to render it moderately warm.

This is the only colic wherein ardent ſpirits, ſpiceries, or any thing of a hot nature, may be ventured upon. Nor indeed are they to be uſed here, unleſs at the very beginning, before there be any ſymptoms of inflammation. We have reaſon to believe, that a colic occaſioned by wind or flatulent food might always be cured by ſpirits and warm liquors, if they were taken immediately upon perceiving the firſt uneaſineſs; but when the pain has continued for a conſiderable time, and there is reaſon to fear an inflammation of the bowels is already begun, all hot things are to be avoided, and the patient is to be treated in the ſame manner as for the iliac paſſion.

Several kinds of food, as honey, eggs, &c. occaſion colics in ſome particular conſtitutions. I have generally found, the beſt cure for theſe colics was to drink plentifully of ſmall diluting liquors, as water-gruel, ſmall poſſet, toaſt and water, &c.

Colics which proceed from exceſs and indigeſtion, generally cure themſelves, by occaſioning vomiting or purging. Theſe diſcharges are by no means to be ſtopped, but promoted by drinking plenty of warm water, or weak poſſet. When their violence is over, the patient may take a doſe of rhubarb, or any other gentle purge, to carry off the dregs of his debauch.

Colics which are occaſioned by wet feet, or catching cold, may generally be removed at the

beginning, by bathing the feet and legs in warm water, and drinking ſuch warm diluting liquors as will promote the perſpiration, as weak wine-whey, or water-gruel with a ſmall quantity of ſpirits in it.

Thoſe flatulent colics, which prevail ſo much in the country, might generally be prevented, if people were careful to change their clothes when they get wet. They ought likewiſe to take a dram, or to drink ſome warm liquor, after eating any kind of green traſh. We do not mean to recommend the practice of dram-drinking, but in this caſe ardent liquors prove a real medicine, and indeed the beſt that can be applied.

The *bilious* colic is attended with very acute pain about the region of the navel. The patient complains of great thirſt, and is generally coſtive. He vomits a hot, bitter, yellow-coloured bile, which being diſcharged, ſeems to afford ſome relief, but is quickly followed by the ſame violent pain as before. As the diſtemper advances, the propenſity to vomit increaſes, inſomuch that ſometimes it becomes almoſt continual, and the proper motion of the inteſtines is ſo far perverted, that there are all the ſymptoms of an impending iliac paſſion.

If the patient be young and ſtrong, and the pulſe full and frequent, it will be proper to bleed, after which clyſters may be adminiſtered. Clear whey or gruel, ſharpened with the juice of lemon, or cream of tartar, muſt be drank freely. Small chicken-broth, with a little manna diſſolved in it, or a ſlight decoction of tamarinds, are likewiſe very proper, or any other thin, acid, opening liquor.

Beſide bleeding and plentiful dilution, it will be neceſſary to foment the belly with cloths dipped in warm water; and if this ſhould not ſucceed, the patient

patient muſt be ſet in a warm bath up to the chin.

Mild purgatives are here likewiſe neceſſary, as the lenitive electuary, manna, cream of tartar, or, what will anſwer very well, the bitter purging ſalts. Theſe may be diſſolved in water, and given in the ſame manner as directed for the iliac paſſion. If theſe medicines will not ſtay on the ſtomach, it will be neceſſary to join an opiate with them *.

Such as are liable to frequent returns of the bilious colic ſhould uſe fleſh ſparingly, and live chiefly upon a light vegetable diet. They ſhould likewiſe take frequently a doſe of cream of tartar with tamarinds, or any other cool acid purge.

The *hyſteric* colic bears a great reſemblance to the bilious. It is attended with acute pain about the region of the ſtomach, vomiting, &c. But what the patient vomits in this caſe is commonly of a greeniſh colour. There is a great ſinking of the ſpirits, with dejection of mind and difficulty of breathing, which are the characteriſtic ſymptoms of this diſorder. Sometimes it is accompanied with the jaundice; but this generally goes off of its own accord in a few days.

In this colic all evacuations, as bleeding, purging, vomiting, &c. do hurt. Every thing that weakens the patient, or ſinks the ſpirits, is to be avoided. If, however, the vomiting ſhould prove violent, weak camomile-tea, or ſmall poſſet, may be drank to cleanſe the ſtomach. Afterwards the

* The beſt way in this caſe is to adminiſter, firſt, a full doſe of laudanum, forty, fifty, or ſixty drops, according to the exigence of the caſe. If the ſtomach will not retain this, a double quantity may be mixed with two or three ounces of water-gruel, and thrown up in the form of an injection. Five or ſix hours thereafter, a purgative may be adminiſtered; and with a view to promote this, a laxative clyſter may be afterwards given, when, from the time or from the patient's ſenſations, there is reaſon to think the purgative begins to take effect.

patient may take fifteen, twenty, or twenty-five drops of liquid laudanum in a glaſs of cinnamon-water. This may be repeated every ten or twelve hours till the ſymptoms abate.

The patient may likewiſe take four or five of the fœtid pills three times a-day, and drink a cup of penny-royal tea after them. If aſafœtida ſhould diſagree with the ſtomach, which is ſometimes the caſe, a tea-ſpoonful of the tincture of caſtor in a cup of penny-royal tea, or thirty or forty drops of the balſam of Peru dropped upon a bit of loaf-ſugar, may be taken in its ſtead. The anti-hyſteric plaſter may alſo be applied to the region of the navel, which has often a good effect.

The *nervous* colic prevails moſt among miners, ſmelters of lead, plumbers, the makers of white lead, &c. It is very difficult to cure, and often ends in a palſy.

No diſeaſe of the bowels is attended with more excruciating pain than this. Nor is it ſoon at an end. I have known it continue eight or ten days, with very little intermiſſion, the belly all the while continuing bound in ſpite of medicine, yet at length yield, and the patient recover.

The general treatment of this diſeaſe is ſo nearly the ſame with that of the iliac paſſion, or inflammation of the guts, that we ſhall not inſiſt upon it. The belly is to be opened by mild purgatives given in ſmall doſes, and frequently repeated; and their operation muſt be aſſiſted by ſoft oily clyſters, fomentations *, &c.

The Barbadoes tar is ſaid to be a proper medicine in this diſeaſe. It may be taken to the quantity of two drams three times a-day, or oftener if the ſtomach will bear it. This tar, mixed with an equal quantity

* Caſtor oil, as a mild laxative, may be adminiſtered with advantage here, in a doſe of from half an ounce to an ounce and a half.

quantity of ſtrong rum, is likewiſe proper for rubbing the ſpine, in caſe any tingling, or other ſymptoms of a palſy are felt. When this tar cannot be obtained, the back may be rubbed with ſtrong ſpirits, or a little of the oil of nutmegs or roſemary.

If the patient remain weak or languid after this diſeaſe, he muſt take exerciſe on horſeback, and uſe an infuſion of Jeſuits bark in wine. When the diſeaſe ends in a palſy, the bath-waters are found to be extremely proper.

To avoid this colic, people muſt ſhun all ſour fruits, acid and auſtere liquors, &c. Thoſe who work in lead ought never to go to their buſineſs faſting, and their food ſhould be oily or fat. They may take a glaſs of ſalad oil, with a little brandy or rum every morning, but ſhould never take ſpirits alone. Liquid aliment is beſt for them; as fat broths, &c.; but low living is bad. They ſhould now and then go a little out of the tainted air; and ſhould take care to keep their body open, either by means of diet or ſome gentle laxative.

Sundry other kinds of this diſeaſe might be mentioned, but too many diſtinctions would tend only to perplex and bewilder the reader. Thoſe already mentioned are the moſt material, and ſhould indeed be attended to, as their treatment is very different. But even thoſe who are not in a condition to diſtinguiſh very accurately in theſe matters, may nevertheleſs be of great ſervice to patients in colics, by only obſerving the following general rules: Firſt, To bathe the patient's feet and legs in warm water; and next to apply bladders filled with warm water, or cloths dipped in it, to his ſtomach and bowels. Afterwards, to make him drink freely of weak diluting warm liquors. And, laſtly, To give him an emollient clyſter every two or three hours.

INFLAMMATION OF THE KIDNEYS.

CAUSES.——This diſeaſe may proceed from any of thoſe cauſes which produce an inflammatory fever. It is likewiſe occaſioned by wounds or bruiſes of the kidneys, and by ſmall ſtones or gravel lodging within them. It may alſo proceed from ſtrong diuretic medicines; as ſpirits of turpentine, tincture of cantharides, &c. Violent motion, as hard riding or walking, eſpecially in hot weather, or whatever drives the blood forcibly into the kidneys, may occaſion this malady. It may likewiſe proceed from lying too ſoft, or too much on the back, or from involuntary contractions, or ſpaſms in the urinary veſſels, &c.

SYMPTOMS.——There is a ſharp pain about the region of the kidneys, with ſome degree of fever, and a ſtupor or dull pain in the thigh of the affected ſide. The urine is at firſt clear, and afterwards of a reddiſh colour; but in the worſt kind of the diſeaſe it generally continues pale, is paſſed with difficulty, and commonly in ſmall quantities at a time. The patient feels great uneaſineſs when he endeavours to walk or ſit upright. He lies with more eaſe on the affected ſide than on the ſound; and has generally a nauſea or vomiting, reſembling that which happens in the colic.

This diſeaſe, however, may be diſtinguiſhed from the colic by the pain being ſeated farther back, and by the difficulty of paſſing urine, which is a conſtant ſymptom of this diſeaſe.

REGIMEN.——Every thing of a heating or ſtimulating nature is to be avoided. The food muſt be thin and light; as water-pap, ſmall broths, with mild vegetables, and the like. Emollient and ſoft liquors muſt be plentifully drank; as clear

clear whey, or balm-tea ſweetened with honey, decoctions of marſh-mallow-roots, with barley and liquorice, &c. The patient, notwithſtanding the vomiting, muſt conſtantly keep ſipping ſmall quantities of theſe or other diluting liquors. Nothing ſo ſafely and certainly abates the inflammation, and expels the obſtructing cauſe, as copious dilution. The patient muſt be kept eaſy, quiet, and free from cold, ſo long as any ſymptoms of inflammation appear.

MEDICINE.——Bleeding is here very neceſſary, eſpecially at the beginning. Ten or twelve ounces may be let from the arm or foot with a lancet; and if the pain and inflammation continue, the operation may be repeated in twenty-four hours, eſpecially if the patient be of a full habit. Leeches may likewiſe be applied to the hæmorrhoidal veins, as a diſcharge from theſe will greatly relieve the patient.

Cloths dipped in warm water, or bladders filled with it, muſt be applied to the part affected, and renewed as they grow cool. If the bladders be filled with a decoction of mallows and camomile flowers, to which a little ſaffron is added, and mixed with about a third part of new milk, it will be ſtill more beneficial.

Emollient clyſters are likewiſe frequently to be adminiſtered; and if theſe do not open the belly, a little honey or manna may be added to them.

The ſame courſe is to be followed where gravel or a ſtone is lodged in the kidney; but when the gravel or ſtone is ſeparated from the kidney, and lodges in any of the urinary paſſes, it will be proper, beſides the fomentations, to rub the part with a little ſweet oil, and to give gentle diuretics; as juniper-water, ſweetened with the ſyrup of marſh-mallows, or a tea-ſpoonful of the ſweet ſpirits of

nitre, now and then, in a cup of the patient's drink. He ought likewiſe to take exerciſe on horſeback, or in a coach, &c.

When the diſeaſe is protracted beyond the ſeventh or eighth day, and the patient complains of a ſtupor, and heavineſs of the part, has frequent returns of chillneſs, ſhivering, &c. there is reaſon to ſuſpect, that matter is forming in the kidney, and that an abſceſs or ulcer will enſue.

When matter in the urine ſhews, that an ulcer is already formed in the kidney, the patient muſt be careful to abſtain from all acrid, ſour, and ſalted proviſions; and muſt live chiefly upon mild mucilaginous herbs and fruits, together with the broth of young animals, made with barley and common pot-herbs, &c. His drink may be whey, and butter-milk that is not ſour. The latter is reckoned a ſpecific remedy in ulcers of the kidneys. To anſwer this character, however, it muſt be drank for a conſiderable time. Chalybeate waters have likewiſe been found beneficial in this diſeaſe. This medicine is eaſily obtained, as it is found in every part of Great Britain. It muſt likewiſe be uſed for a conſiderable time, in order to produce any ſalutary effects.

Thoſe who are liable to frequent returns of inflammation, or obſtruction of the kidneys, muſt abſtain from wines, eſpecially ſuch as abound with tartar; and their food muſt be light, and of eaſy digeſtion. They ſhould uſe moderate exerciſe, and ſhould not lie too hot, nor too much on their back *.

IN-

* They ought likewiſe carefully to avoid coſtiveneſs.

OF THE INFLAMMATION OF THE BLADDER.

THE inflammation of the bladder proceeds, in a great meaſure, from the ſame cauſes as that of the kidneys. It is known by an acute pain towards the bottom of the belly, and difficulty of paſſing urine, with ſome degree of fever, a conſtant inclination to go to ſtool, and a perpetual deſire to make water.

This diſeaſe muſt be treated on the ſame principles as the immediately preceding. The diet muſt be light and thin, and the drink cooling and diluting. Bleeding is very proper at the beginning; and in robuſt conſtitutions, it will often be neceſſary to repeat it. The bottom of the belly muſt be frequently fomented with warm water, or a decoction of mild vegetables; and emollient clyſters muſt frequently be adminiſtered, &c.

The patient ſhould abſtain from every thing that is of a hot, acrid, and ſtimulating nature; and ſhould live entirely upon ſmall broths, gruels, or mild vegetables.

A ſtoppage of urine may proceed from other cauſes beſides an inflammation of the bladder; as a ſwelling of the hæmorrhoidal veins, hard *fæces* lodged in the *rectum*, a ſtone in the bladder, excreſcences in the urinary paſſages, a palſy of the bladder, hyſteric affections, &c. Each of theſe requires a particular treatment, which does not fall under our conſideration here. We ſhall only obſerve, that in all of them a mild and gentle treatment is the ſafeſt, as ſtrong diuretic medicines, or things of an irritating nature, generally increaſe the danger. Some perſons have killed themſelves by introducing probes into the urinary paſſages, to remove, as they thought, ſomewhat that obſtructed

ſtructed the paſſage of the urine; and others have brought on a violent inflammation of the bladder, by uſing ſtrong diuretics for that purpoſe.

INFLAMMATION OF THE LIVER.

The liver is leſs ſubject to inflammation than many of the other viſcera, as in it the circulation is ſlower; but when an inflammation does happen, it is with difficulty removed, and often ends in a ſuppuration or ſchirrus.

CAUSES.——Beſide the common cauſes of inflammation, we may here reckon the following, viz. exceſſive fatneſs, a ſchirrus of the liver itſelf, violent ſhocks from ſtrong vomits when the liver was before unſound, an aduſt or atrabiliarian ſtate of the blood, any thing that ſuddenly cools the liver after it has been greatly heated, ſtones obſtructing the courſe of the bile, drinking ſtrong wines or ſpiritous liquors, uſing hot ſpicy aliment, obſtinate hypochondriacal diſtempers, &c.

SYMPTOMS.——This diſeaſe is known by a painful tenſion of the right ſide under the falſe ribs, attended with ſome degree of fever, a ſenſe of weight, or fulneſs of the part, difficulty of breathing, loathing of food, great thirſt, with a pale or yellowiſh colour of the ſkin and eyes.

The *ſymptoms* here are various, according to the degree of inflammation, and likewiſe according to the particular part of the liver where the inflammation happens. Sometimes the pain is ſo inconſiderable, that an inflammation is not ſo much as ſuſpected;

ſuſpected; but when it happens in the upper or convex part of the liver, the pain is more acute, the pulſe quicker, and the patient is often troubled with a dry cough, a hiccup, and a pain extending to the ſhoulder, with difficulty of lying on the left ſide, &c.

This diſeaſe may be diſtinguiſhed from the pleuriſy, by the pain being leſs violent, ſeated under the falſe ribs, the pulſe not ſo hard, and by the difficulty of lying on the left ſide. It may be diſtinguiſhed from the hyſteric and hypochondriac diſorders by ſome degree of fever, with which it is always attended.

This diſeaſe, if properly treated, is ſeldom mortal. A conſtant hiccuping, violent fever, and exceſſive thirſt, are very bad ſymptoms. If it ends in a ſuppuration, and the matter cannot diſcharge itſelf outwardly, the danger is great. When a ſchirrus of the liver enſues, the patient, if he obſerves a proper regimen, may live a number of years tolerably eaſy; but if he indulges in animal food and ſtrong liquors, or takes medicines of an acrid or irritating nature, the ſchirrus will be converted into a cancer, which muſt infallibly prove fatal.

REGIMEN.——The ſame regimen is to be obſerved in this as in other inflammatory diſorders. All hot things are to be carefully avoided, and cool reſolving liquors, as whey, barley-water, &c. drank freely. The food muſt be light and thin, and the body, as well as the mind, muſt be kept eaſy and quiet.

MEDICINE.——Bleeding is proper at the beginning of this diſeaſe, and it will often be neceſſary, even though the pulſe ſhould not feel hard, to repeat the operation. The belly muſt be kept gently open; but all violent purgatives are to be avoided. A decoction of tamarinds, with a little honey

honey or manna, will anſwer this purpoſe very well. The ſide affected muſt be frequently fomented with warm water, in the manner directed in the foregoing diſeaſes. Mild laxative clyſters ſhould be frequently adminiſtered; and if the pain ſhould notwithſtanding continue violent, a bliſtering-plaſter may be applied over the part affected.

Medicines which promote the ſecretion of urine have a very good effect here. For this purpoſe, half a dram of purified nitre, or half a tea-ſpoonful of the ſweet ſpirits of nitre, may be taken in a cup of the patient's drink three or four times a-day.

When there is an inclination to ſweat, it ought to be promoted, but not by warm ſudorifics. The only thing to be uſed for that purpoſe is plenty of diluting liquor drank about the warmth of the human blood. Indeed the patient in this caſe, as well as in all other topical inflammations, ought to drink nothing that is colder than the blood.

If the ſtools ſhould be looſe, and even ſtreaked with blood, nothing muſt be given to ſtop them, unleſs they be ſo frequent as to weaken the patient. Looſe ſtools often prove critical, and carry off the diſeaſe *.

If the diſorder, in ſpite of all endeavours to the contrary, ſhould end in a ſchirrus, the patient muſt be careful to regulate his diet, &c. in ſuch a manner as not to aggravate the diſeaſe. He muſt not indulge in fleſh, fiſh, ſtrong liquors, or any poignant or ſalted proviſions; but muſt, for the moſt part, live on mild vegetables, as fruits and roots, taking gentle exerciſe, and drinking whey, barley-water, or butter-milk. If he takes any thing ſtronger,

* When, in conſequence of the previous inflammation, an abſceſs happens to form in the liver, if this ſhould point outwardly, it ought to be opened by an incision.

ſtronger, it ſhould be fine mild ale, which is much more ſafe than wines or ſpirits.

We ſhall take no notice of inflammations of the other viſcera. They muſt all be treated upon the ſame principle as thoſe already mentioned. The great rule with reſpect to all of them, is to avoid every thing that is ſtrong, or of a heating nature, to apply warm fomentations to the part affected, and to ſupply the patient with plenty of weak, warm, diluting drink *.

OF THE CHOLERA MORBUS, OR VOMITING AND LOOSENESS.

This is a violent purging and vomiting, attended with gripes, and a conſtant deſire to go to ſtool. It comes on ſuddenly, and is moſt common in autumn. There is hardly any diſeaſe that kills more quickly than this, when proper means are not uſed in due time for removing it.

CAUSES.——It is occaſioned by a redundancy and putrid acrimony of the bile; by food that eaſily turns rancid or ſour on the ſtomach; as butter, fat pork, ſweetmeats, cucumbers, melons, cherries, &c. It is ſometimes the effect of ſtrong acrid purges or vomits; or of poiſonous ſubſtances taken into the ſtomach. It may likewiſe proceed from violent paſſions of the mind; as fear, anger, &c.

SYMPTOMS.——It is generally preceded by a

* Blood-letting, both general and topical, as well as bliſtering, certainly ought not to be omitted in this catalogue.

a *cardialgia* or heart-burn, four belchings, and flatulences, with pain of the ſtomach and inteſtines. To theſe ſucceed exceſſive vomiting, and purging of a green, yellow, or blackiſh coloured bile, with a diſtenſion of the ſtomach, and violent griping pains. There is likewiſe a great thirſt, with a very quick unequal pulſe, and often a fixed acute pain about the region of the navel. As the diſeaſe advances, the pulſe often ſinks ſo low as to be quite imperceptible, the extremities grow cold, or cramped, and covered with a clammy ſweat, the urine is obſtructed, and there is a palpitation of the heart. Violent hiccuping, fainting, and convulſions, are the ſigns of approaching death.

MEDICINE.——At the beginning of this diſeaſe, the efforts of nature to expel the offending cauſe muſt be aſſiſted, by promoting the purging and vomiting. For this purpoſe, the patient muſt drink plenty of diluting liquors; as whey, butter-milk, warm water, thin water-gruel, ſmall poſſet, or, what is perhaps preferable to any of them, very weak chicken-broth. This ſhould not only be drank freely, to promote the vomiting, but a clyſter of it given every hour, in order to promote the purging.

After theſe evacuations have been continued for ſome time, a decoction of toaſted oat-bread may be drank to ſtop the vomiting. The bread ſhould be toaſted till it is of a brown colour, but not burned, and afterwards boiled in ſpring-water. If oat-bread cannot be had, wheat-bread, or oat-meal well toaſted, may be uſed it in its ſtead. If this does not put a ſtop to the vomiting, the ſaline mixture may be taken as directed before.

The vomiting and purging, however, ought never to be ſtopped too ſoon. So long as theſe diſcharges do not weaken the patient, they are ſalutary, and may be allowed to go on, or rather ought to be promoted. But when the patient is much exhauſted

exhauſted by the evacuations, or has a ſmall intermitting pulſe, coldneſs of the extremities, with other ſymptoms of weakneſs, recourſe muſt immediately be had to opiates, and generous cordial medicines. Ten or fifteen drops of liquid laudanum, in half a glaſs of ſtrong cinnamon-water, may be taken every four or five hours, till the violent ſymptoms be removed. Warm negus, or ſtrong wine-whey, may likewiſe be taken to ſupport the patient's ſpirits, and promote the perſpiration. His legs may be rubbed with flannel-cloths, or wrapped in warm blankets, and warm bricks applied to the ſoles of his feet.

When the violence of the diſeaſe is over, to prevent a relapſe, it will be neceſſary, for ſome time, to continue the uſe of ſmall doſes of laudanum. Ten or twelve drops may be taken in a glaſs of wine, at leaſt twice a-day, for eight or ten days. The patient's food ought to be nouriſhing, but taken in ſmall quantities, and he ſhould uſe moderate exerciſe. As the ſtomach and inteſtines are generally much weakened, an infuſion of the bark, or other bitters, in ſmall wine, may be drank for ſome time.

Though phyſicians are ſeldom called in due time in this diſeaſe, they ought not, however, to deſpair of relieving the patient even in the moſt deſperate circumſtances. Of this I lately ſaw a very ſtriking inſtance in an old man and his ſon, who had been both ſeized with it about the middle of the night. I did not ſee them till next morning, when they had much more the appearance of dead than of living men. No pulſe could be felt; the extremities wete quite cold, and rigid; the countenance was ghaſtly, and the ſtrength quite exhauſted. Yet from this deplorable condition they were both recovered by the uſe of opiates and cordial medicines, with the regimen mentioned above.

OF

OF A DIARRHOEA, OR LOOSENESS.

A LOOSENESS, in many cafes, is not to be conſidered as a diſeaſe, but rather as a ſalutary evacuation. It never ought to be ſtopped, unleſs when it continues too long, or evidently weakens the patient. As this, however, ſometimes happens, we ſhall point out the moſt common cauſes of a looſeneſs, with the method of treatment proper in each caſe.

When a looſeneſs is occaſioned by catching cold, or an obſtructed perſpiration, the patient ought to keep warm, to drink freely of weak diluting liquors, to bathe his feet and legs frequently in lukewarm water, to wear flannel next his ſkin, and to take every other method to reſtore the perſpiration.

In a looſeneſs which proceeds from exceſs or repletion, a vomit is the proper medicine. Vomits not only clean the ſtomach, but promote all the ſecretions, which renders them of great importance in carrying off a debauch. Half a dram of ipecacoanha in powder will anſwer the purpoſe very well. A day or two after the vomit, the ſame quantity of rhubarb may be taken, and repeated two or three times, if the looſeneſs continue. The patient ought to live upon light vegetable food of eaſy digeſtion, and to drink whey, thin gruel, or barley-water.

A looſeneſs occaſioned by the obſtruction of any cuſtomary evacuation, as the bleeding piles in men, the monthly diſcharges in women, &c. generally requires bleeding. If that does not ſucceed, other evacuations, as iſſues, ſetons, &c. may be ſubſtituted in the room of thoſe which are obſtructed. At the ſame time, every method is to be taken to

reſtore

reſtore the uſual diſcharges, as not only the cure of the diſeaſe, but the patient's life, may depend on this.

A periodical looſeneſs ought never to be ſtopped. It is always an effort of nature to carry off ſome offending matter, which, if retained in the body, might produce fatal diſeaſes. Children are very liable to this kind of looſeneſs, eſpecially while teething. It is, however, ſo far from being hurtful to them, that ſuch children generally get their teeth with leaſt trouble. If theſe looſe ſtools ſhould at any time prove ſour or griping, a tea-ſpoonful of magneſia alba, with four or five grains of rhubarb, may be given to the child in a little pap or any other food. This, if repeated three or four times, will generally correct the acidity, and carry off the griping ſtools *.

A diarrhœa or looſeneſs which proceeds from violent paſſions or affections of the mind, muſt be treated with the greateſt caution. Vomits in this caſe are highly improper. Nor are purges ſafe, unleſs they be very mild, and given in ſmall quantities. Opiates, and other antiſpaſmodic medicines, are moſt proper. Ten or twelve drops of liquid laudanum may be taken in a cup of valerian or penny-royal tea, every eight or ten hours, till the ſymptoms abate. Eaſe, chearfulneſs, and tranquillity of mind, are here of the greateſt importance.

When a looſeneſs proceeds from acrid or poiſonous ſubſtances taken into the ſtomach, the patient muſt drink large quantities of diluting liquors, with

* We would conſider the potio cretacea, or the chalk julep, as being a gentle aſtringent, a preferable remedy in this caſe. It may be given in doſes of two or three tea-ſpoonfuls, to be repeated after each evacuation. Where this medicine is not conveniently to be had, a tea-ſpoonful of fine powdered chalk may be mixed in a tea-cupful of water-gruel, and a tea-ſpoonful of this given occaſionally.

oil or fat broths, to promote vomiting and purging. Afterwards, if the bowels are inflamed, bleeding will be neceſſary. Small doſes of laudanum may likewiſe be taken to remove the ſpaſms and the irritation of the bowels.

When gouty matter, repelled from the extremities, occaſions a looſeneſs, it is by no means to be ſtopped, but promoted by gentle doſes of rhubarb, or other mild purgatives. The gouty matter is likewiſe to be ſolicited to the extremities by warm fomentations and cataplaſms. And the perſpiration ought to be promoted by warm diluting liquors; as wine-whey with ſpirits of hartſhorn, or a few drops of liquid laudanum in it.

When a looſeneſs proceeds from worms, ſuch medicines ought to be uſed as kill or carry off theſe vermin; as powder of tin, with purges of rhubarb and calomel, &c. The proper doſes of theſe medicines will be pointed out when we come to treat of diſeaſes occaſioned by worms.

A looſeneſs is often occaſioned by bad water. When this is the caſe, the diſeaſe generally proves epidemical. When there is reaſon to believe that this or any other diſeaſe proceeds from the uſe of unwholeſome water, it ought immediately to be changed, or, if that cannot be done, it may be corrected by mixing with it quicklime, chalk, or the like.

In people whoſe ſtomachs are weak, violent exerciſe immediately after meals will occaſion a looſeneſs. Though the cure of this is obvious, yet it will be proper, beſides avoiding violent exerciſe, to uſe ſuch medicines as tend to brace and ſtrengthen the ſtomach, as infuſions of the bark, with other bitter and aſtringent medicines, in white wine. The perſon ought likewiſe to take frequently a glaſs or two of old red port, or good claret.

Perſons who, from a peculiar weakneſs, or too great

great an irritability of the bowels, are liable to frequent returns of this diſeaſe, ſhould live temperately, avoiding crude ſummer-fruits, all unwholeſome food, and meats of hard digeſtion. They ought likewiſe to beware of cold, moiſture, or whatever may obſtruct the perſpiration, and ſhould wear flannel next their ſkin. All violent paſſions of the mind, as fear, anger, &c. are likewiſe carefully to be avoided.

OF THE DYSENTERY, OR BLOODY-FLUX.

This diſeaſe prevails in the ſpring and autumn. It is very infectious, and often epidemical. Thoſe perſons are moſt liable to it who are much expoſed to the night-air, or who live in places where the air is confined and unwholeſome. Hence it often proves fatal in camps, on ſhipboard, in jails, hoſpitals, and ſuch like places.

CAUSES.——This diſeaſe may be occaſioned by any thing that obſtructs the perſpiration, or renders the humours putrid; as damp beds, wet clothes, unwholeſome diet, air, &c. But it is moſt frequently communicated by infection. This ought to make people extremely cautious in going near ſuch perſons as labour under the diſeaſe. Even the ſmell of the patient's excrements has been known to communicate the infection.

SYMPTOMS.——It is known by a flux of the belly attended with violent pain of the bowels, a conſtant inclination to go to ſtool, and generally leſs or more of blood in the ſtools. It begins, like other fevers, with chillneſs, loſs of ſtrength, a quick pulſe, great thirſt, and an inclination to vomit. The ſtools are at firſt greaſy or frothy, after-

wards they are ſtreaked with blood, and, at laſt, have frequently the appearance of pure blood, mixed with ſmall filaments, or bits of ſkin. Sometimes, however, there is no blood in the ſtools through the whole courſe of the diſeaſe. When the patient goes to ſtool, he feels a bearing down, as if the whole bowels were falling out, and ſometimes a part of the inteſtine is actually protruded, which proves exceeding troubleſome, eſpecially in children.

This diſeaſe may be diſtinguiſhed from the diarrhœa or looſeneſs, by the acute pain of the bowels, and the blood which generally appears in the ſtools *. It may be diſtinguiſhed from the *cholera morbus* by its not being attended with ſuch violent and frequent fits of vomiting, &c.

When the dyſentery attacks the old, the delicate, or ſuch as have been waſted by ſcorbutic, conſumptive, or other lingering diſeaſes, it generally proves fatal. Vomiting and hiccuping are bad ſigns, as they ſhew an inflammation of the ſtomach. When the ſtools have an exceedingly diſagreeable ſmell, are green, black, or mixed with ſmall glandular ſubſtances, or bits of ſkin, the danger is great. It is an unfavourable ſymptom when clyſters are immediately returned; but ſtill more ſo, when the paſſage is ſo obſtinately ſhut, that they cannot be injected. A weak pulſe, coldneſs of the extremities, with difficulty of ſwallowing, and convulſions, are ſigns of approaching death.

REGIMEN.——Nothing is of more importance in this diſeaſe than cleanlineſs. It contributes greatly

* The two diſeaſes, we believe, may in general be better diſtinguiſhed by the appearance of the ſtools. In dyſentery, the ſtools are generally ſmall in quantity, and conſiſt, at firſt, moſtly of mucus or of blood, or of a mixture of the two; while, at the ſame time, the natural fœces are commonly retained. In diarrhœa, the diſcharge conſiſts moſtly of feculent matter, only in a more fluid form than uſual.

greatly to the recovery of the patient, and no leſs to the ſafety of ſuch as attend him. In all contagious diſeaſes the danger is increaſed, and the infection ſpread, by the neglect of cleanlineſs; but in none more than in this. Every thing about the patient ſhould be frequently changed. The excrements ſhould never be ſuffered to continue in his chamber, but removed immediately, and buried under ground. A conſtant ſtream of freſh air ſhould be admitted into the chamber; and it ought frequently to be ſprinkled with vinegar, juice of lemon, or ſome other ſtrong acid.

The patient muſt not be diſcouraged, but his ſpirits kept up in hopes of a cure. Nothing tends more to render any putrid diſeaſe mortal, than the fears and apprehenſions of the ſick. All diſeaſes of this nature have a tendency to ſink and depreſs the ſpirits; and when that is increaſed by fears and alarms from thoſe whom the patient believes to be perſons of ſkill, it cannot fail to have the worſt effects.

A flannel veſt worn next the ſkin has often a very good effect in a dyſentery. This promotes the perſpiration without greatly heating the body. Great caution, however, is neceſſary in leaving it off. I have often known a dyſentery brought on by imprudently throwing off a flannel veſt before the ſeaſon was ſufficiently hot. For whatever purpoſe this piece of dreſs be worn, it ſhould never be left off but in a warm ſeaſon.

In this diſeaſe the greateſt attention muſt be paid to the patient's diet. Fleſh, fiſh, and every thing that has a tendency to turn putrid or rancid on the ſtomach, muſt be abſtained from. Apples boiled in milk, water-pap, and plain light pudding, with broth made of the gelatinous parts of animals, may be eat. Jelly-broth not only anſwers the purpoſe of food, but likewiſe of medicine. I have often

known dyſenteries cured by it, after pompous medicines had proved ineffectual *.

Another kind of food very proper in the dyſentery, which may be uſed by ſuch as cannot take the broth mentioned above, is made by boiling a few handfuls of fine flower, tied in a cloth, for ſix or ſeven hours, till it becomes as hard as ſtarch. Two or three table-ſpoonfuls of this may be grated down, and boiled in ſuch a quantity of new milk and water as to be of the thickneſs of pap. This may be ſweetened to the patient's taſte, and taken for his ordinary food †.

The patient may likewiſe be allowed to eat freely of moſt kinds of good ripe fruit; as apples, grapes, currant-berries, ſtrawberries, &c. Theſe may either be eat raw or boiled, with or without milk, as

* The manner of making this broth is, to take a ſheep's head and feet, with the ſkin upon them, and to burn the wool off with a hot iron, in the manner they do in Scotland. Afterwards to boil them till the broth is quite a jelly. A little cinnamon or mace may be added to give the broth an agreeable flavour, and the patient may take a little of it warm with toaſted bread, three or four times a-day. A clyſter of it may likewiſe be given twice a-day. Such as cannot uſe the broth made in this way, may have the head and feet ſkinned; but we have reaſon to believe that this hurts the medicine. It is not our buſineſs here to reaſon upon the nature and qualities of medicines, otherwiſe this might be ſhewn to poſſeſs virtues every way ſuited to the cure of a dyſentery which does not proceed from a putrid ſtate of the humours. One thing we know, which is preferable to all reaſoning, that whole families have often been cured by it, after they had uſed many other medicines in vain. It will, however, be proper that the patient take a vomit, and a doſe or two of rhubarb, before he begins to uſe the broth. It will likewiſe be neceſſary to continue the uſe of it for a conſiderable time, and to make it the principal food.

† The learned Dr Rutherford, late profeſſor of medicine in the univerſity of Edinburgh, uſed to mention this medicine in his public lectures with great encomiums. He directed it to be made by tying three or four handfuls of the fineſt flower, as tight as poſſible, in a linen rag, afterwards to dip it frequently in water, and to dridge the outſide with flower till a cake or cruſt be formed around it, which prevents the water from ſoaking into it while boiling. It is then to be boiled till it becomes a hard dry maſs, as directed above. This will not only anſwer the purpoſe of food, but may likewiſe be given in clyſters.

as the patient chuſes. The prejudice againſt fruit in this diſeaſe is ſo great, that many believe it to be the common cauſe of dyſenteries. This, however, is an egregious miſtake. Both reaſon and experience ſhew, that good fruit is one of the beſt medicines, both for the prevention and cure of the moſt dangerous kind of dyſentery. In a dyſentery ariſing from a putrid ſtate of the humours, fruit is in every reſpect calculated to counteract that tendency to putrefaction, from whence all the danger proceeds. The patient in ſuch a caſe ought therefore to be allowed to eat as much fruit as he pleaſes, provided it be good *.

The moſt proper drink in this diſorder is whey. The dyſentery has often been cured by the uſe of clear whey alone. It may be taken both for drink, and in form of clyſter. When whey cannot be had, barley-water ſharpened with cream of tartar may be drank, or a decoction of barley and tamarinds; two ounces of the former and one of the latter may be boiled in two Engliſh quarts of water to one. Warm water, water gruel, or water wherein hot iron has been frequently quenched, are all very proper, and may be drank in turns. Camomile-tea, if the ſtomach will bear it, is an exceeding proper drink. It both ſtrengthens the

* I lately attended a young gentleman who had been ſeized with a dyſentery in North America. All means had been tried for his relief, but to no purpoſe. At length, tired out with diſappointments from medicine, and reduced to ſkin and bone, he came over to Britain, rather with a view to die among his relations than with any hopes of a cure. After trying ſundry medicines here with no better ſucceſs than abroad, I adviſed him to leave off the uſe of drugs, and to truſt entirely to a diet of milk and fruits, with gentle exerciſe. Strawberries were the only fruit he could procure at that ſeaſon. Theſe he eat with milk twice, and ſometimes thrice a-day. The conſequence was, that in a ſhort time his ſtools were reduced from upwards of twenty in a day, to three or four, and ſometimes not ſo many. He uſed the other fruits as they came in, and was, in a few weeks, ſo well as to leave the part of the country where I was, with a view to return to America.

ſtomach, and by its antiſeptic quality tends to prevent a mortification of the bowels.

MEDICINE.——At the beginning of this diſeaſe it is always neceſſary to cleanſe the firſt paſſages. For this purpoſe, a vomit of ipecacoanha muſt be given, and wrought off with weak camomile-tea. Strong vomits are ſeldom neceſſary here. A ſcruple, or at moſt half a dram of ipecacoanha, is generally ſufficient for an adult, and ſometimes a very few grains will ſuffice. The day after the vomit, half a dram or two ſcruples of rhubarb muſt be taken. This doſe may be repeated every other day for two or three times. Afterwards ſmall doſes of ipecacoanha may be taken for ſome time. Two or three grains of the powder may be mixed in a table-ſpoonful of the ſyrup of poppies, and taken three times a-day.

Theſe evacuations, and the regimen preſcribed above, will ſeldom fail to perform the cure. Should it, however, happen otherwiſe, the following aſtringent medicines muſt be uſed.

A clyſter of ſtarch or fat mutton-broth, with twenty or thirty drops of liquid laudanum in it*, may be adminiſtered twice a-day. At the ſame time, an ounce of gum-arabic, and half an ounce of gum-tragacanth, may be diſſolved in an Engliſh pint of barley-water, over a ſlow fire, and a table-ſpoonful of it taken every hour.

If theſe have not the deſired effect, the patient may take, four times a-day, about the bulk of a nutmeg of the *Japonic confection*, drinking after it a tea-cupful of the decoction of logwood; which may be thus made:

Boil three or four ounces of the ſhavings of logwood in two Engliſh quarts of water to one; towards

* Laudanum, to have any ſalutary effect in this complaint, ſhould be given in two or three times the quantity that is here mentioned.

wards the end, add two drams of cinnamon-bark. This decoction gives the ſtools a reddiſh colour, which is ſometimes miſtaken for blood. We mention this circumſtance to prevent the patient from being alarmed at their appearance.

Some have treated dyſenteries very ſucceſsfully, by giving the patient white wax diſſolved in milk. Others extol the virtues of the *Conneſſi* root, the *Simaruba* bark, &c. for the cure of this diſeaſe. When other medicines fail, theſe ſtrong aſtringents may be tried; but we hope they will ſeldom be found neceſſary. At any rate, aſtringent, or binding medicines, never are to be uſed till proper evacuations have been premiſed, otherwiſe they will fix the diſeaſe inſtead of removing it.

Perſons who have been cured of this diſeaſe are very liable to relapſe; to prevent which, great circumſpection with reſpect to diet is neceſſary. The patient muſt abſtain from all fermented liquors, except now and then a glaſs of good wine; but he muſt drink no kind of malt-liquor. He muſt likewiſe abſtain from animal food, as fiſh and fleſh, and muſt live principally upon milk and vegetables.

Gentle exerciſe and wholeſome air are likewiſe of importance. The patient ſhould go to the country as ſoon as his ſtrength will permit, and ſhould take exerciſe daily on horſeback, or in a machine. He may likewiſe uſe bitters infuſed in wine or brandy, and may drink twice a-day a gill of lime-water, mixed with an equal quantity of new milk.

When dyſenteries prevail, we would recommend a ſtrict attention to cleanlineſs, a ſpare uſe of animal food, and the free uſe of ſound ripe fruits, and other vegetables. The night-air is to be carefully avoided, and all communication with the ſick. Bad ſmells are likewiſe to be ſhunned, eſpecially

thoſe

thoſe which ariſe from putrid animal ſubſtances. The office-houſes where the ſick go are very dangerous. Nothing is more apt to occaſion the diſeaſe than being greatly afraid of it.

When the firſt ſymptoms of the dyſentery appear, the patient ought immediately to take a vomit, to go to bed, and drink plentifully of weak warm liquor, to promote a ſweat. This, with a doſe or two of rhubarb, would often carry off the diſeaſe at the beginning. In countries where dyſenteries prevail, we would adviſe ſuch as are liable to them to take either a vomit or a doſe of phyſic every ſpring and autumn, as a preventive.

There are ſundry other fluxes of the belly, as the LIENTERY and COELIAC PASSION, which, though leſs dangerous than the dyſentery, yet merit conſideration. Theſe diſeaſes generally proceed from a relaxed ſtate of the ſtomach and inteſtines, which is ſometimes ſo great, that the food paſſes through them without almoſt any ſenſible alteration; and the patient dies merely from the want of nouriſhment.

When the lientery or cœliac paſſion ſucceed a dyſentery, they often prove fatal. They are always dangerous in old age, eſpecially when the conſtitution has been broken by exceſs or acute diſeaſes. If the ſtools be very frequent and quite crude, thirſt great, with little urine, the mouth ulcerated, and the face marked with ſpots of different colours, the danger is very great.

The treatment of the patient is in general the ſame as in the dyſentery *. In all obſtinate fluxes of the belly, from whatever cauſe, the cure muſt be attempted, by firſt cleaning the ſtomach and bowels

* It may be neceſſary to obſerve here, that in the lientery, purges, or even laxatives of the mildeſt quality, are abſolutely pernicious; and that *opiates* and *aſtringents*, repeated according to the urgency of the caſe, are alone to be depended on.

bowels with gentle vomits and purges. Afterwards ſuch a diet as has a tendency to brace and ſtrengthen the bowels, with opiates and aſtringent medicines, will generally perfect the cure.

This obſervation likewiſe holds with reſpect to a TENESMUS, or frequent deſire of going to ſtool. It reſembles the dyſentery ſo much, both in its ſymptoms and method of cure, that we think it needleſs to inſiſt upon it.

OF A DIABETES, OR EXCESSIVE DISCHARGE OF URINE.

The diabetes may be called a flux of the kidneys. It is ſeldom to be met with among young people; but I have often known it happen to labourers in the decline of life, eſpecially thoſe who followed the more violent employments, and who had been hard drinkers in their youth.

CAUSES.——A diabetes is often the conſequence of acute diſeaſes, as fevers, fluxes, &c. where the patient has ſuffered exceſſive evacuations; it may alſo be occaſioned by exceſſive fatigue, as riding long journeys upon a hard-trotting horſe, carrying heavy burdens, running, &c. It may be brought on by the uſe of ſtrong ſtimulating diuretic medicines, as tincture of cantharides, ſpirits of turpentine, and ſuch like. It is often the effect of drinking large quantities of mineral waters. Many imagine that theſe will do them no ſervice unleſs they be drank in large quantities, by

by which miſtake it happens, that they often occaſion worſe diſeaſes than thoſe they were taken to cure. In a word, this diſeaſe may either proceed from too great a laxity of the organs which ſecrete the urine, from ſomething that ſtimulates the kidneys too much, or from a thin diſſolved ſtate of the blood, which makes too great a quantity of it run off by the urinary paſſages.

SYMPTOMS.——In a diabetes the urine generally exceeds in quantity all the liquid food and drink which the patient takes. It is thin and pale, of a ſweetiſh taſte, and an agreeable ſmell. The patient has a continual thirſt, with ſome degree of fever; his mouth is dry, and he ſpits frequently a frothy ſpittle. The ſtrength fails, the appetite decays, and the fleſh waſtes away till the patient is reduced to ſkin and bone. There is a heat of the bowels; and frequently the loins, teſticles, and feet are ſwelled.

This diſeaſe may ſometimes be cured at the beginning; but after it has continued long, the cure becomes very difficult. In drunkards, and very old people, a cure is not to be expected.

REGIMEN.——Every thing that ſtimulates the urinary paſſages, or tends to relax the habit, muſt be avoided. The patient ſhould live chiefly on ſolid food. His thirſt may be quenched with acids, as ſorrel, juice of lemon, or vinegar. The mucilaginous vegetables, as rice, ſago, and ſalep, with milk, are the moſt proper food. Of animal ſubſtances, ſhell-fiſh are to be preferred, as oyſters, crabs, &c.

The drink may be Briſtol-water. When that cannot be obtained, lime-water with milk may be drank. This will be better, if an ounce of gum-arabic be diſſolved in every pound of it. The white decoction, with iſinglaſs diſſolved in it,

is

is likewiſe a very proper drink. It is made by boiling two ounces of calcined hartſhorn, and half an ounce of gum-arabic, in three Engliſh pints of water, to two, and afterwards ſtraining it.

The patient ought daily to take exerciſe, but it ſhould be ſo gentle as not to fatigue him. He ſhould lie upon a hard bed or matreſs. Nothing hurts the kidneys more than lying too ſoft. A warm dry air, the uſe of the fleſh-bruſh, and every thing that promotes perſpiration, is of ſervice. For this reaſon, the patient ought to wear flannel next his ſkin. A large ſtrengthening plaſter may be applied to the back; or, what will anſwer the ſame end, a broad girdle may be worn about the loins.

MEDICINE.——Gentle purges, if the patient be not too much weakened by the diſeaſe, have a good effect. They tend to promote a flux of the humours, towards the inteſtines, and of courſe to leſſen the diſcharge by the kidneys. They may conſiſt of rhubarb, with cardamum-ſeeds, or any other ſpiceries, infuſed in wine, and may be taken in ſuch quantities as to keep the belly gently open.

The patient muſt next have recourſe to aſtringents and corroborants. Half a dram of powder, made of equal parts of allum, and the gum called *dragon's blood*, may be taken four times a-day, or oftener if the ſtomach will bear it. The allum muſt firſt be melted in a crucible; afterwards they may both be pounded together. Along with every doſe of this powder, the patient may take a tea-cupful of the tincture of roſes. It is made by infuſing in a ſtone-ware veſſel, for four hours, an ounce of the dried leaves of red roſes, with one dram of ſpirit of vitriol, in two Engliſh pints of boiling water. Afterwards the tincture may be filtered,

filtered, and four or five ounces of white ſugar added to it.

If the patient's ſtomach cannot bear the allum in ſubſtance, whey may be made of it, and taken in the doſe of three or four ounces, three times a-day. The allum-whey is prepared by boiling two Engliſh quarts of milk over a ſlow fire, with three drams of allum, till it be turned into whey.

Opiates are of ſervice in this diſeaſe, even though the patient reſts well. They take off ſpaſm and irritation, and at the ſame time leſſen the force of the circulation. Ten or twelve drops of liquid laudanum may be taken in a cup of the patient's drink, two or three times a-day.

The beſt corroborants which we know, are the Jeſuits bark and wine. A dram of bark may be taken in a glaſs of red port or claret, three times a-day. The medicine will be more efficacious, and leſs diſagreeable, if fifteen or twenty drops of the acid elixir of vitriol be added to every doſe. Such as cannot take the bark in ſubſtance, may uſe the decoction, mixed with an equal quantity of red wine, and ſharpened as above *.

There is a diſeaſe pretty incident to labouring people in the decline of life, called *an INCONTINENCY of urine*. This differs entirely from a diabetes, as the water paſſes off involuntarily by drops, and does not exceed the uſual quantity. This diſeaſe is rather troubleſome than dangerous. It is owing to a relaxation of the ſphincter of the bladder, and is often the effect of a palſy. Sometimes it proceeds from hurts, or injuries occaſioned by blows, bruiſes, preternatural labours, &c. Sometimes

* The moſt ſucceſsful method of treating this diſeaſe at preſent ſeems to be, to reſtrict the patient ſolely to a diet of animal food, with as ſmall a proportion of bread as poſſible. Of the different kinds of animal food, ſhell-fiſh, as oyſters, ſeem particularly ſerviceable."

times it is the effect of a fever. It may likewiſe be occaſioned by a long uſe of ſtrong diuretics, or of ſtimulating medicines injected into the bladder.

This diſeaſe may be mitigated by the uſe of aſtringent and corroborating medicines, ſuch as have been mentioned above; but we do not remember ever to have ſeen it cured *.

OF A SUPPRESSION OF URINE.

It has already been obſerved, that a ſuppreſſion of urine may proceed from various cauſes, as an inflammation of the kidneys or bladder, ſmall ſtones or gravel lodged in the urinary paſſages, hard *fæces* lying in the *rectum*, a ſpaſm or contraction of the neck of the bladder, clotted blood in the bladder, a ſwelling of the hæmorrhoidal veins, &c.

Some of theſe caſes require the cathater, both to remove the obſtructing matter, and to draw off the urine; but as this inſtrument can only be managed with ſafety by perſons ſkilled in ſurgery, we ſhall ſay nothing further of its uſe.

We would chiefly recommend, in all obſtructions of urine, fomentations and evacuations. If the patient be young, of a full habit, and if his pulſe be hard, frequent bleeding will be neceſſary, eſpecially

* A machine made of tin, and properly adapted to the inſide of the patient's thigh, may be worn without much inconvenience; and by ſerving as a receptacle to the urine, will contribute much to his eaſe in this complaint.

eſpecially where there are ſymptoms of a topical inflammation. Bleeding in this caſe, not only abates the fever, by leſſening the force of the circulation, but, by relaxing the ſolids, takes off the ſpaſm or ſtricture upon the veſſels, which occaſioned the obſtruction.

After bleeding, fomentations muſt be uſed. Theſe may either conſiſt of warm water alone, or of decoctions of mild vegetables; as mallows, camomile-flowers, &c. Cloths dipped in theſe may either be applied to the part affected, or a large bladder, filled with the decoction, may be kept continually upon it. Some put the herbs themſelves into a flannel-bag, and apply them to the part, which is far from being a bad method. Theſe continue longer warm than cloths dipped in the decoction, and at the ſame time keep the part equally moiſt.

In all obſtructions of urine, the belly ought to be kept open. This is not, however, to be attempted by briſk purgatives, but by emollient clyſters, or gentle infuſions of ſenna and manna. Clyſters in this caſe, not only open the belly, but anſwer the purpoſe of an internal fomentation, and greatly aſſiſt in removing ſpaſms of the bladder, &c.

The food muſt be light, and taken in ſmall quantities. The drink may be weak broth, or decoctions and infuſions of mucilaginous vegetables, as marſh-mallow roots, lime-tree buds, &c. A tea-ſpoonful of the ſweet ſpirits of nitre, or a dram of Caſtile ſoap, may be frequently put into the patient's drink; and if there be no inflammation, he may drink ſmall gin-punch without acid.

In a ſuppreſſion of urine, nature often attempts to relieve the patient by a ſweat, looſeneſs, ſpitting, gulping up of clear water from the ſtomach, &c. Theſe diſcharges ought not to be ſuppreſſed, but

but encouraged, as the patient's life often depends on them.

Perſons ſubject to a ſuppreſſion of urine, ought to live very temperate. Their diet ſhould be light, and their liquor diluting. They ought to avoid all acids, and wines that abound with tartar; they ſhould likewiſe take plenty of exerciſe, lie hard, and avoid ſtudy and ſedentary occupations.

OF COSTIVENESS.

No perſon can long enjoy good health, who does not go regularly to ſtool. There is, however, a very great difference of perſons in this reſpect, ſome being able to bear coſtiveneſs much longer than others. We do not here mean to treat of thoſe aſtrictions of the bowels, which are the ſymptoms of diſeaſes, as in the colic, the iliac paſſion, &c. but only to take notice of that infrequency of ſtools which ſometimes happens, and which, in ſome particular conſtitutions, may occaſion diſeaſes.

Coſtiveneſs may proceed from drinking rough red wines, or other aſtringent liquors; too much exerciſe, eſpecially on horſeback: It may likewiſe proceed from a long uſe of cold inſipid food, which does not ſufficiently ſtimulate the inteſtines. Sometimes it is owing to the bile not deſcending to the inteſtines, as in the jaundice; and at other times it proceeds from diſeaſes of the inteſtines themſelves, as a palſy, ſpaſms, tumors, a cold dry ſtate of the inteſtines, &c.

When coſtiveneſs is conſtitutional, it may be borne a long time without any bad effects; but when it proceeds from an inflammation or tumor in the inteſtines, it is dangerous. Coſtiveneſs, when long continued, is apt to occaſion pains of the head, vomiting, colics, &c. It is peculiarly hurtful to hypochondriac and hyſteric perſons, as it generates wind and other grievous ſymptoms.

Perſons who are liable to be coſtive, ſhould live upon a moiſtening and laxative diet, as roaſted or boiled apples, pears, ſtewed prunes, raiſins, gruels with currants, butter, honey, and ſugar, &c. Green broths with ſpinage, leeks, and other ſoft pot-herbs, are likewiſe proper. Rye-bread, or that which is made of a mixture of wheat and rye together, ought to be eat. No perſon troubled with coſtiveneſs, ſhould eat wheat-bread alone, eſpecially that which is made of fine flower. The beſt bread for keeping the belly ſoluble is, what the Engliſh call *meſlin*. It is made of equal parts of wheat and rye; or more commonly of two parts of the former, to one of the latter.

Coſtiveneſs is increaſed by keeping the body too warm, and by every thing that promotes the perſpiration; as wearing flannel, lying too long a-bed, &c. Intenſe thought, and a ſedentary life, are likewiſe hurtful. All the ſecrations and excretions are promoted by moderate exerciſe without doors, and by a gay, chearful, ſprightly temper of mind.

The drink ſhould be of an opening quality. All ardent ſpirits, auſtere and aſtringent wines, as port, claret, &c. ought to be avoided. Malt-liquor that is fine, and of a moderate ſtrength, is very proper. Butter-milk, whey, and other watery liquors, are likewiſe proper, and may be drank in turns, as the patient's inclination directs.

Thoſe

Thoſe who are troubled with coſtiveneſs, ought, if poſſible, to remedy it by diet, as the conſtant uſe of medicines for that purpoſe is attended with many inconveniences, and often with bad conſequences *. I never knew any one get into a habit of taking medicine for keeping the belly open, who could leave it off. In time, the cuſtom becomes neceſſary, and generally ends in a total relaxation of the bowels, indigeſtion, loſs of appetite, waſting of the ſtrength, and death.

When the belly cannot be kept open without medicine, we would recommend gentle doſes of rhubarb to be taken twice or thrice a-week. This is not near ſo injurious to the ſtomach as aloes, jalap, or the other draſtic purgatives ſo much in uſe. Infuſions of ſenna and manna may likewiſe be taken, or half an ounce of ſoluble tartar diſſolved in water-gruel. About the ſize of a nutmeg of lenitive electuary, taken twice or thrice a-day, generally anſwers the purpoſe very well †.

* The learned Dr Arbuthnot adviſes thoſe who are troubled with coſtiveneſs, to uſe animal oils, as freſh butter, cream, marrow, fat broths, eſpecially thoſe made of the internal parts of animals, as the liver, heart, midriff, &c. He likewiſe recommends the expreſſed oils of mild vegetables, as olives, almonds, paſtaches, and the fruits themſelves; all oily and mild fruits, as figs; decoctions of mealy vegetables, theſe lubricate the inteſtines; ſome ſaponaceous ſubſtances, which ſtimulate gently, as honey, hydromel, or boiled honey and water, unrefined ſugar, &c.

The Doctor obſerves, that ſuch lenitive ſubſtances are proper for perſons of dry atrabilarian conſtitutions, who are ſubject to aſtriction of the belly, and the piles, and will operate when ſtronger medicinal ſubſtances are ſometimes ineffectual; but that ſuch lenitive diet hurts thoſe whoſe bowels are weak and lax. He likewiſe obſerves, that all watery ſubſtances are lenitive, and that even common water, whey, ſour milk, and butter-milk, have that effect:—That new milk, eſpecially aſſes milk, ſtimulates more when it ſours on the ſtomach; and that whey turned ſour, will purge ſtrongly:—That moſt garden-fruits are likewiſe laxative; and that ſome of them, as grapes, will throw ſuch as take them immoderately, into a cholera morbus, or incurable diarrhœa.

† With thoſe whoſe ſtomach will admit of an oily medicine, half an ounce, or ſix drams of *caſtor-oil*, is in general both an effectual and

OF INVOLUNTARY DISCHARGES OF BLOOD.

SPONTANEOUS, or involuntary diſcharges of blood, often happen from various parts of the body. They are ſeldom, however, attended with great danger, and prove often ſalutary. When ſuch diſcharges are critical, which is frequently the caſe in fevers, they ought not to be ſtopped. Nor indeed is it proper at any time to ſtop them, unleſs they be ſo great as to endanger the patient's life. Moſt people, afraid of the ſmalleſt appearance of blood from any part of the body, fly immediately to the uſe of ſtiptic and aſtringent medicines, by which means an inflammation of the brain, or ſome other fatal diſeaſe, is occaſioned, which, had the diſcharge been allowed to go on, might have been prevented.

Periodical diſcharges of blood, from whatever part of the body they proceed, muſt not be ſtopped. Theſe are always the efforts of nature, to relieve herſelf; and fatal diſeaſes have often been the conſequence of obſtructing them. It may indeed be ſometimes neceſſary to check the violence of ſuch diſcharges; but even this requires the greateſt caution. Inſtances may be given, where the ſtopping of a ſmall periodical flux of blood, from one of the fingers, has proved fatal to the perſon's health.

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and a mild laxative: a dram of the flowers of ſulphur, taken in a ſpoonful of milk, will, in general, anſwer the ſame purpoſe; with this difference in their operation, however, that the laſt operates ſlowly, while the firſt operates ſoon after it is taken.

In the early period of life, bleeding at the noſe is moſt common. Thoſe who are farther advanced in life, are more liable to a hæmoptoe, or diſcharge of blood from the lungs. After the middle period of life, hæmorrhoidal fluxes are moſt common; and in the decline of life, diſcharges of blood from the urinary paſſages.

Involuntary fluxes of blood may proceed from very different, and often from quite oppoſite cauſes. Sometimes they are hereditary, or owing to a particular conſtruction of the body, as a ſanguine temperament, a lax or plethoric habit, &c. Sometimes they proceed from a determination of the blood towards one particular part, as the head, the hæmorrhoidal veins, &c. They may likewiſe proceed from an inflammatory diſpoſition of the blood; in which caſe, there is generally ſome degree of fever: this likewiſe happens when the flux is occaſioned by an obſtructed perſpiration, or a ſtricture upon the ſkin, the bowels, or any particular part of the ſyſtem.

But a diſſolved ſtate of the blood will likewiſe occaſion hæmorrhages. Thus, in putrid fevers, the ſcurvy, the malignant ſmall-pox, &c. there are often very great diſcharges of blood from different parts of the body. They may likewiſe be brought on by the uſe of any medicines which tend to diſſolve the blood, as mercury, cantharides, and the volatile alkaline ſalts, &c. Food of an acrid or irritating quality may likewiſe occaſion hæmorrhages; as alſo ſtrong purges and vomits, or any thing that greatly ſtimulates the bowels.

Violent paſſions or agitations of the mind will alſo occaſion hæmorrhages. Theſe often cauſe bleeding at the noſe; and I have known them ſometimes occaſion an hæmorrhage in the brain. Violent efforts of the body, by overſtraining or hurting the veſſels, may likewiſe bring on hæmor-

rhages, eſpecially when the body is long kept in an unnatural poſture, as hanging the head very low, &c.

The cure of an hæmorrhage muſt be adapted to its cauſe. When it proceeds from too much blood, or a tendency to inflammation, bleeding, with gentle purges and other evacuations, will be neceſſary. It will likewiſe be proper for the patient in that caſe to live chiefly upon a vegetable diet, to avoid all ſtrong liquors, and food that is of an acrid, hot, or ſtimulating quality. The body ſhould be kept cool, and the mind eaſy.

When an hæmorrhage is owing to a putrid or diſſolved ſtate of the blood, the patient ought to live chiefly upon acid fruits, with milk, and vegetables of a nouriſhing nature, as ſago, ſalop, &c. His drink may be wine diluted with water, and ſharpened with the juice of lemon, vinegar, or ſpirits of vitriol. The beſt medicine in this caſe is the Jeſuits bark. It may be taken as already directed.

When a flux of blood is the effect of acrid food, or of ſtrong ſtimulating medicines, the cure is to be effected by ſuch ſoft and mucilaginous diet, as is recommended in the dyſentery or bloody-flux. The patient may likewiſe take frequently about the bulk of a nutmeg of Locatelli's balſam, or the ſame quantity of ſpermaceti.

When an obſtructed perſpiration, or a ſtricture upon any part of the ſyſtem, is the cauſe of an hæmorrhage, it may be removed by drinking warm diluting liquors, lying a-bed, bathing the extremities in warm water, &c.

OF

OF BLEEDING AT THE NOSE.

A BLEEDING at the noſe is commonly preceded by ſome degree of quickneſs of the pulſe, a fluſhing in the face, pulſation of the temporal arteries, heavineſs in the head, dimneſs of the ſight, heat and itching of the noſtrils, &c.

To perſons who abound with blood, this diſcharge is very ſalutary. It often cures a vertigo, the head-ach, a phrenzy, and even an epilepſy. In fevers where there is a great determination of blood towards the head, it is of the utmoſt ſervice. It is likewiſe beneficial in inflammations of the liver and ſpleen, and often in the gout and rheumatiſm. In all diſeaſes where evacuations are neceſſary, a ſpontaneous diſcharge of blood from the noſe, is of much more ſervice than the ſame quantity let with a lancet.

In a diſcharge of blood from the noſe, the great point is to determine whether it ought to be ſtopped or not. It is a common practice to ſtop the bleeding, without conſidering whether it be a diſeaſe, or the cure of a diſeaſe. This conduct proceeds from fear; but it has many bad and ſometimes even fatal conſequences.

When a diſcharge of blood from the noſe happens in any inflammatory diſeaſe, there is always reaſon to believe that it may prove ſalutary; and therefore it ſhould be ſuffered to go on, at leaſt as long as the patient ſeems to bear it well.

When it happens to perſons in perfect health, who are full of blood, it ought not to be ſtopped; eſpecially if the ſymptoms of plethora, mentioned

above, have preceded it. In this caſe it cannot be ſtopped without riſking the patient's life.

In fine, whenever bleeding at the noſe relieves any bad ſymptom, and does not proceed ſo far as to endanger the patient's life, it ought not to be ſtopped. But when it returns frequently, or continues till the pulſe becomes very low, the extremities begin to grow cold, the lips pale, or the patient complains of being ſick, or like to faint, it muſt immediately be ſtopped.

The patient ſhould be ſet nearly upright, with his head inclining a little backwards, and his legs immerſed in water about the warmth of new milk. His hands ought likewiſe to be put in lukewarm water, and his garters may be tied a little tighter than uſual, about three inches above the knee. Ligatures may likewiſe be applied to the arms, about the place where they are uſually made for bleeding, and with nearly the ſame degree of tightneſs. Theſe muſt be gradually ſlackened as the blood begins to ſtop, and removed entirely as ſoon as it gives over.

Sometimes dry lint put up the noſtrils will ſtop the bleeding. When this does not ſucceed, doſſils of lint dipped in ſtrong ſpirits of wine may be put up the noſtrils, or, if that cannot be had, they may be dipped in brandy. Roman vitriol diſſolved in water may likewiſe be uſed for this purpoſe, or a tent, dipped in the white of an egg well beat up, may be rolled in a powder made of equal parts of white-ſugar, burnt-allum, and white-vitriol, and put up the noſtril from whence the blood iſſues.

Internal medicines can hardly take place here, as they have ſeldom time to operate. It may not, however, be amiſs to give the patient half an ounce of Glauber's ſalts, and the ſame quantity of manna, diſſolved in four or five ounces of barley-water. This may be taken at a draught, and repeated if

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it does not operate in a few hours. Ten or twelve grains of nitre may be taken in a glaſs of cold water and vinegar every hour, or oftener if the ſtomach will bear it. If a ſtronger medicine be neceſſary, a tea-cupful of the tincture of roſes, made as before directed, with twenty or thirty drops of the ſmall ſpirit of vitriol, may be taken every hour. When theſe things cannot be had, the patient may drink water, with a little common ſalt in it, or equal parts of water and vinegar.

If the genitals be immerſed in cold water, it will generally ſtop a bleeding at the noſe.—I have never known this fail.

Sometimes, when the blood is ſtopped outwardly, it continues to bleed inwardly. This is very dangerous, and requires particular attention, as the patient is apt to be ſuffocated with the blood, eſpecially if he falls aſleep, which he is very ready to do after loſing a great quantity of blood *.

After the bleeding is ſtopped, the patient ought to be kept as eaſy and quiet as poſſible. He ought not to pick his noſe, nor to take away the the tents or clotted blood, till they fall off of their own accord, and ſhould not lie with his head too low.

Thoſe who are affected with frequent bleeding at the noſe, ought to bathe their feet often in warm-water, and keep them warm and dry. They ought

* When a hæmorrhage from the noſe proves ſo violent as to threaten the life of the patient, the following method is recommended. Let a piece of catgut, or waxed thread doubled, be introduced at the anterior noſtril, whence the blood iſſues, till the double appear in the throat; when being laid hold of and drawn out at the mouth, a piece of ſpunge muſt be introduced into it large enough to fill up the poſterior noſtril. The other end of the ſtring muſt now be drawn till the ſpunge be applied with ſufficient tightneſs to the paſſage; when another piece of ſpunge being adapted to the ſize of the anterior noſtril, the two ends of the ſtring muſt now be ſeparated from one another, and a nooſe formed by theſe on the ſpunge, ſo tight as completely to fill up the opening.

ought to wear nothing tight about their necks, to keep their body as much in an erect poſture as poſſible, and never to view any object obliquely. If they have too much blood, a vegetable diet, with now and then a doſe of phyſic, is the ſafeſt way to leſſen it.

But when the diſeaſe proceeds from a thin diſſolved ſtate of the blood, the diet ſhould be rich and nouriſhing; as ſtrong broths with bread, ſago-gruel with wine and ſugar, &c. Infuſions of the Jeſuits bark in wine ought likewiſe to be taken, and perſiſted in for a conſiderable time.

OF THE BLEEDING AND BLIND PILES.

A DISCHARGE of blood from the hæmorrhoidal veſſels is called the *Bleeding piles*. When the veſſels only ſwell, and diſcharge no blood, but are exceeding painful, the diſeaſe is called the *Blind piles*.

Perſons of a looſe ſpungy texture, of a bulky ſize, who live high, and lead a ſedentary inactive life, are moſt ſubject to this diſeaſe. It is often owing to a hereditary diſpoſition. Where this is the caſe, it attacks perſons more early in life than when it is accidental. Men are more liable to it than women, eſpecially thoſe of a ſanguine plethoric habit, or of a melancholy diſpoſition.

The piles may be occaſioned by an exceſs of blood, by ſtrong aloetic purges, high-ſeaſoned food, drinking great quantities of ſweet-wines, the neglect

glect of bleeding, or other cuſtomary evacuations, much riding, great coſtiveneſs, or any thing that occaſions hard or difficult ſtools. Anger, grief, and other violent paſſions, will likewiſe occaſion the piles. I have often known them brought on by cold, eſpecially about the *anus*. A pair of thin breeches will occaſion the diſorder in a perſon who is ſubject to it, and ſometimes even in thoſe who never had it before. Pregnant women are often afflicted with the piles.

A flux of blood from the *anus* is not always to be reckoned a diſeaſe. It is even more ſalutary than bleeding at the noſe, and often prevents or carries off diſeaſes. It is peculiarly beneficial in the gout, rheumatiſm, aſthmas, and hypochondriacal complaints, and often proves critical in colics, and inflammatory fevers.

In the treatment of this diſeaſe, regard muſt be had to the patient's habit of body, his age, ſtrength, and manner of living. A diſcharge which might be exceſſive, and prove hurtful to one, may be very moderate, and even ſalutary to another. That only is to be eſteemed dangerous, which continues ſo long, and in ſuch quantity, as to waſte the patient's ſtrength, hurt the digeſtion, nutrition, and other functions neceſſary to life.

When that is the caſe, the diſcharge muſt be checked by proper regimen, and aſtringent medicines. The DIET muſt be cool, but nouriſhing, conſiſting chiefly of bread, milk, cooling vegetables, and broths. The DRINK may be chalybeate water, orange whey, decoctions or infuſions of the aſtringent and mucilaginous plants, as the tormentil root, the marſh-mallow roots, &c.

Old conſerve of red roſes is a very good medicine in this caſe. It may be mixed with new milk, and taken in the quantity of an ounce, three or four times a-day. This medicine is in no great repute,

pute, owing to its being ſeldom taken in ſuch quantity as to produce any effects; but when taken as here directed, and duly perſiſted in, I have known it perform very extraordinary cures, in violent hæmorrhages, eſpecially when aſſiſted by the tincture of roſes; a tea-cupful of which may be taken about an hour after every doſe of the conſerve. The method of preparing this tincture is mentioned in a former part of this Work.

The Jeſuits bark is likewiſe proper in this caſe, both as a ſtrengthener and aſtringent. It may be taken, in the quantity of a dram, in a little red wine, ſharpened with the ſpirit of vitriol.

The bleeding piles are ſometimes periodical, and return regularly once a month, or once in three weeks. In this caſe, they are always to be conſidered as a ſalutary diſcharge, and by no means to be ſtopped. Some have entirely ruined their health, by ſtopping a periodical diſcharge of blood from the hæmorrhoidal veins.

In the *blind piles*, bleeding is generally of uſe. The diet muſt be light and thin, and the drink cool and diluting. It is likewiſe neceſſary that the belly be kept gently open. This may be done by ſmall doſes of flower of brimſtone and cream of tartar. Theſe may be mixed in equal quantities, and a tea-ſpoonful taken two or three times a-day, or as often as is neceſſary, to keep the belly eaſy. Or an ounce of flower of brimſtone, and half an ounce of purified nitre, may be mixed with three or four ounces of the lenitive electuary, and a tea-ſpoonful of this taken three or four times a-day.

Emollient clyſters are likewiſe beneficial; but there is ſometimes ſuch an aſtriction of the *anus*, that they cannot be thrown up. In this caſe, I have known a vomit have an exceeding good effect.

When

When the piles are exceeding painful, and ſwelled, but diſcharge nothing, the patient muſt ſit over the ſteam of warm water. He may likewiſe apply a linen-cloth, dipped in warm ſpirits of wine, to the part, or poultices made of bread and milk, or of leeks fried with butter. If theſe do not produce a diſcharge, and the piles appear large, leeches muſt be applied as near the piles as poſſible, or if they will fix upon the piles themſelves, ſo much the better. When leeches will not fix, the piles may be opened with a lancet. The operation is very eaſy, and is attended with no danger.

Various ointments, and other external applications, are recommended in the piles; but I do not remember ever to have ſeen any effects from theſe worth mentioning. Their principal uſe is to keep the part ſoft, which may be done equally well by a ſoft poultice, or an emollient cataplaſm *.

SPITTING OF BLOOD.

We only mean here to treat of that diſcharge of blood from the lungs, which commonly goes by the name of an *hæmoptoe*, or *ſpitting of blood*. Perſons of a ſlender make, and a lax fibre, who have long necks and ſtrait breaſts, are moſt liable to this diſeaſe. It is moſt common in the ſpring, and

* An ointment compoſed of equal parts of hog's lard, and galls finely powdered, has been recommended in affections of this kind.

and generally attacks people before they arrive at the prime or middle period of life. It is a common obſervation, that thoſe who have been ſubject to bleeding at the noſe when young, are afterwards moſt liable to an hæmoptoe.

CAUSES.——An hæmoptoe may proceed from exceſs of blood, from a peculiar weakneſs of the lungs, or a bad conformation of the breaſt. It is often occaſioned by exceſſive drinking, running, wreſtling, ſinging, or ſpeaking aloud. Such as have weak lungs, ought to avoid all violent exertions of that organ, as they value life. They ſhould likewiſe guard againſt violent paſſions, and every thing that occaſions a rapid circulation of the blood.

This diſeaſe may likewiſe proceed from wounds of the lungs. Theſe may either be received from without, or they may be occaſioned by hard bodies getting into the wind-pipe, and ſo falling down upon the lungs, and hurting their tender veſſels. The obſtruction of any cuſtomary evacuation may occaſion a ſpitting of blood; as the neglect of bleeding or purging at the uſual ſeaſons, the ſtoppage of the bleeding piles in men, or the menſes in women, &c. It may likewiſe proceed from a polypus, ſchirrous concretions, or any thing that obſtructs the circulation of the blood in the lungs. It is often the effect of a long and violent cough; in which caſe, it is generally the forerunner of a conſumption. A violent degree of cold ſuddenly applied to the external parts of the body, will occaſion an hæmoptoe. It may likewiſe be occaſioned by breathing in air which is too much rarified, to be able properly to expand the lungs. This is often the caſe with thoſe who work in hot places, as furnaces, glaſs-houſes, &c. It may likewiſe happen to ſuch as aſcend to the top of very high mountains, as the Peak of Teneriff, &c.

Spitting

Spitting of blood is not always to be conſidered as a primary diſeaſe. It is often only a ſymptom, and in ſome caſes not an unfavourable one. This is the caſe in pleuriſies, peripneumonies, and ſundry other fevers. In a dropſy, ſcurvy, or conſumption, it is a bad ſymptom, and ſhews that the lungs are ulcerated.

SYMPTOMS.——Spitting of blood is generally preceded by a ſenſe of weight, and oppreſſion of the breaſt, a dry tickling cough, hoarſeneſs, and a difficulty of breathing. Sometimes it is uſhered in with ſhivering, coldneſs of the extremities, coſtiveneſs, great laſſitude, flatulence, pains of the back and loins, &c. As theſe ſhew a general ſtricture upon the veſſels, and a tendency of the blood to inflammation, they are commonly the forerunners of a very copious diſcharge. Theſe ſymptoms do not attend a diſcharge of blood from the gums or fauces, by which means they may always be diſtinguiſhed from an hæmoptoe. Sometimes the blood that is ſpit up is thin, and of a florid red colour; and at other times it is thick, and of a dark or blackiſh colour; nothing, however, can be inferred from this circumſtance, but that the blood has lain a longer or ſhorter time in the breaſt, before it was diſcharged.

Spitting of blood, in a ſtrong healthy perſon, of a ſound conſtitution, is ſeldom dangerous; but when it attacks the tender and delicate, or perſons of a weak lax fibre, it is not eaſily removed. When it proceeds from a ſchirrus or polypus of the lungs, it is bad. The danger is greater, when the diſcharge proceeds from the rupture of a large veſſel, than of a ſmall one. When the extravaſated blood is not ſpit up, but lodges in the breaſt, it corrupts, and greatly increaſes the danger. When the blood proceeds from an ulcer in the lungs, it is generally fatal.

REGI-

REGIMEN.——The patient ought to be kept cool, and perfectly at reſt. Every thing that heats the blood, or quickens the circulation, increaſes the danger. The mind ought likewiſe to be ſoothed, and every occaſion of exciting the paſſions avoided. The diet ſhould be ſoft, cooling, and ſlender; as rice boiled with milk, ſmall broths, barley-gruels, panada, &c. The diet, in this caſe, can ſcarce be too low. Even water-gruel is ſufficient to ſupport the patient for ſome days. All ſtrong liquors muſt be avoided. The patient may drink milk and water, barley-water, whey, butter-milk, and ſuch like. Every thing ſhould be drank cold, and in ſmall quantities at a time. The patient muſt obſerve the ſtricteſt ſilence, or at leaſt ſpeak with a very low voice.

MEDICINE.——This, like the other involuntary diſcharges of blood, ought not to be ſuddenly ſtopped by aſtringent medicines. More miſchief is often done by theſe, than if it were ſuffered to go on. It may, however, proceed ſo far as to weaken the patient, and even endanger his life; in which caſe proper means muſt be uſed for reſtraining it *.

The belly ſhould be kept gently open by laxative diet; as roaſted apples, ſtewed prunes, &c. If theſe ſhould not have the effect, a tea-ſpoonful of the lenitive electuary may be taken twice or thrice a-day, as is found neceſſary. If the bleeding proves violent, ligatures may be applied to the extremities, as directed for the bleeding at the noſe.

If the patient be hot or feveriſh, bleeding and ſmall doſes of nitre will be of uſe; a ſcruple or half

* Blood-letting is highly neceſſary in this diſeaſe, and ought to be repeated according to the urgency of the ſymptoms, and the ſtrength of the patient.

half a dram may be taken in a cup of his ordinary drink twice or thrice a-day. His drink may likewiſe be ſharpened with acids, as juice of lemon, or a few drops of the ſpirit of vitriol; or he may take frequently a cup of the tincture of roſes.

Bathing the feet and legs in lukewarm water, by taking off ſpaſm, has a very good effect in this diſeaſe. Opiates too are ſometimes beneficial for that purpoſe; but theſe muſt be given with the greateſt caution. Ten or twelve drops of laudanum may be given in a cup of barley-water twice a day, and continued for ſome time, provided they be found beneficial.

The conſerve of roſes is likewiſe a very good medicine in this caſe, provided it be taken in ſufficient quantity, and long enough perſiſted in. It may be taken to the extent of three or four ounces a-day; and, if the patient be troubled with a cough, it ſhould be made into an electuary with balſamic ſyrup, and a little of the ſyrup of poppies.

If ſtronger aſtringents be found neceſſary, fifteen or twenty drops of the acid elixir of vitriol may be taken in a glaſs of water, three or four times a-day.

Thoſe who are ſubject to frequent returns of this diſeaſe, ſhould be careful to avoid all exceſs. Their diet ſhould be light and cool, conſiſting chiefly of milk and vegetables. Above all, let them beware of vigorous efforts of the body, and violent agitations of the mind.

VOMITING OF BLOOD.

This is not ſo common as the other diſcharges of blood which have already been mentioned; but it is more dangerous, and requires the greateſt attention *.

Vomiting of blood is generally preceded by pains in the ſtomach, ſickneſs and nauſea, and is accompanied with great anxiety, and frequent fainting-fits.

Vomiting of blood is ſometimes periodical; in which caſe it is leſs dangerous. It often proceeds from an obſtruction of the menſes in women; and ſometimes from the ſtopping of the hæmorrhoidal flux in men. It may be occaſioned by any thing that greatly ſtimulates or wounds the ſtomach, as ſtrong vomits or purges, acrid poiſons, ſharp or hard ſubſtances taken into the ſtomach, &c. It is often the effect of obſtructions in the liver, the ſpleen, or ſome of the other viſcera. It may likewiſe proceed from external violence, as blows or bruiſes, or from any of the cauſes which produce inflammation.

A great part of the danger in this diſeaſe ariſes from the extravaſated blood lodging in the bowels, and becoming putrid, by which means a dyſentery or putrid fever may be occaſioned. The beſt way of preventing this, is to keep the belly gently open, by frequently exhibiting emollient clyſters. Purges muſt not be given till the diſcharge is ſtopt, otherwiſe,

* This complaint, we believe, ſeldom occurs as a primary affection, it is more commonly only a ſymptom of ſome other diſeaſe, and is, notwithſtanding of what our author here obſerves, not frequently attended with much danger.

otherwiſe they will irritate the ſtomach, and increaſe the diſorder. All the food and drink muſt be of a mild cooling nature, and taken in ſmall quantities. Even drinking cold water has ſometimes proved a remedy. When there are ſigns of an inflammation, bleeding may be neceſſary; but the patient's weakneſs will ſeldom permit it. Aſtringents can ſeldom be uſed, as they ſtimulate the ſtomach, and of courſe increaſe the diſeaſe. Opiates may be of uſe; but they muſt be given in very ſmall doſes, as four or five drops of liquid laudanum twice or thrice a-day. After the diſcharge is over, as the patient is generally troubled with gripes, occaſioned by the acrimony of the blood lodged in the inteſtines, gentle purges will be neceſſary.

OF BLOODY URINE.

This diſorder is commonly called *piſſing of blood*. It is a diſcharge of blood, with or without urine, from the veſſels of the kidneys or bladder, which may be either enlarged, broken, or eroded. It is more or leſs dangerous according to the different circumſtances which attend it.

When pure blood is voided ſuddenly, without interruption and without pain, it proceeds from the kidneys; but if the blood be in ſmall quantity, of a dark colour, and emitted with heat and pain about the bottom of the belly, it proceeds from the bladder. When bloody urine is occa-

ſioned by a large rough ſtone deſcending from the kidneys to the bladder, which wounds the *ureters*, it is attended with a ſharp pain in the back, and difficulty of making water. If the coats of the bladder are hurt by a ſtone, and bloody urine follows, it is attended with the moſt acute pain, and a previous ſtoppage of urine.

Bloody urine may likewiſe be occaſioned by falls, blows, the lifting or carrying of heavy burdens, hard riding, or any violent motion. It may alſo proceed from ulcers or eroſions of the bladder, from a ſtone lodged in the kidneys, or from violent purges, or ſharp diuretic medicines, eſpecially cantharides.

Bloody urine is always attended with ſome degree of danger; but it is peculiarly ſo when mixed with purulent matter, as this ſhews an ulcer ſomewhere in the urinary paſſages. Sometimes this diſcharge proceeds from exceſs of blood, in which caſe it is rather to be conſidered as a ſalutary evacuation than a diſeaſe. If the diſcharge, however, be very great, it may waſte the patient's ſtrength, and occaſion an ill habit of body, a dropſy, or a conſumption, &c.

The treatment of this diſorder muſt be varied according to the different cauſes from which it proceeds.

When it is owing to a ſtone in the bladder, the cure depends upon an operation, which it is not our buſineſs here to deſcribe.

If it be attended with a plethora, and ſymptoms of an inflammation, bleeding will be neceſſary. The belly muſt likewiſe be kept open by emollient clyſters, or cooling purgative medicines; as cryſtals of tartar, rhubarb, manna, or ſmall doſes of lenitive electuary.

When bloody urine proceeds from a diſſolved ſtate of the blood, it is commonly the ſymptom of

of ſome malignant diſeaſe; as the ſmall-pox, a putrid fever, or the like. In this caſe, the patient's life depends on the liberal uſe of the Jeſuits bark and acids, as has already been ſhewn.

When there is reaſon to ſuſpect an ulcer in the kidneys or bladder, the patient's diet muſt be cool, and his drink of a ſoft, healing, balſamic quality, as decoctions of marſhmallow-roots with liquorice, ſolutions of gum-arabic, &c. Three ounces of marſhmallow-roots, and half an ounce of liquorice, may be boiled in two Engliſh quarts of water to one; two ounces of gum-arabic, and half an ounce of purified nitre, may be diſſolved in the ſtrained liquor, and a tea-cupful of it taken four or five times a-day.

The early uſe of aſtringents in this diſeaſe has often bad conſequences. When the flux is ſtopped too ſoon, the grumous blood, by being confined in the veſſels, may produce inflammations, abſceſs, and ulcers. If, however, the caſe be urgent, or the patient ſeem to ſuffer from the loſs of blood, gentle aſtringents may be neceſſary. In this caſe the patient may take three or four ounces of * lime-water, with half an ounce of the tincture of Jeſuits bark, three times a-day. Or he may take an ounce or two of the conſerve of roſes three or four times a-day, drinking a tea-cupful of the tincture of roſes after it. If ſtronger ſtyptics be neceſſary, a dram of Armenian bole may be taken in a cup of whey three or four times a-day.

* Lime water is prepared by pouring two Engliſh gallons of water gradually upon a pound of quicklime; when the ebullition is over, let the whole ſtand to ſettle for two days, then filter the liquor through paper. It ſhould be kept in veſſels cloſely ſtopped.

OF VOMITING.

VOMITING may proceed from various cauſes; as exceſs in eating or drinking; a foul ſtomach; the acrimony of the aliments; the tranſlation of the morbific matter of ulcers, the gout, the eryſipelas, and other diſeaſes, to the ſtomach. It may likewiſe proceed from a looſeneſs, or flux of blood, being too ſuddenly ſtopped, or from the ſtoppage of any cuſtomary evacuation, as the bleeding piles, the *menſes*, &c. Vomiting may proceed from the weakneſs of the ſtomach, the colic, the iliac paſſion, a rupture, a fit of the gravel, worms, or from any kind of poiſon taken into the ſtomach. It is an uſual ſymptom of hurts of the brain; as contuſions, compreſſions, &c. It is likewiſe a ſymptom of wounds, or inflammations of the diaphragm, inteſtines, ſpleen, liver, kidneys, &c.

Vomiting may be occaſioned by unuſual motions; as riding backwards in a cart or coach, ſailing, &c. It may likewiſe be excited by violent paſſions, or by the idea of nauſeous objects, eſpecially of ſuch things as have formerly produced vomiting. Sometimes it proceeds from a regurgitation of the bile into the ſtomach; in this caſe, what the patient vomits is generally of a yellow or greeniſh colour, and has a bitter taſte. Perſons who are ſubject to nervous affections, are often ſuddenly ſeized with violent fits of vomiting. Laſtly, Vomiting is a common ſymptom of pregnancy. In this caſe, it generally comes on about two weeks after the ſtopping of the *menſes*, and continues during the firſt three or four months.

When

When vomiting proceeds from a foul ſtomach or indigeſtion, it is not to be conſidered as a diſeaſe, but as the cure of a diſeaſe. It ought therefore to be promoted, by drinking luke-warm water, or thin gruel. If this does not put a ſtop to the vomiting, a doſe of ipecacuanha may be taken, and wrought off with weak camomile-tea.

When the retroceſſion of gouty matter, or the obſtruction of cuſtomary evacuations, occaſion vomiting, all means muſt be uſed to reſtore theſe diſcharges; or, if that cannot be effected, their place muſt be ſupplied by others, as bleeding, purging, bathing the extremities in warm water, opening iſſues, ſetons, perpetual bliſters, &c.

When vomiting proceeds from pregnancy, it may generally be relieved by bleeding, and keeping the belly gently open. The bleeding, however, ought to be in ſmall quantities at a time, and the purgatives ſhould be of the mildeſt kind, as figs, ſtewed prunes, manna or ſenna. Pregnant women are moſt apt to vomit in the morning, immediately after getting out of bed, which is owing partly to the change of poſture, but more to the emptineſs of the ſtomach. It may generally be prevented, by taking a diſh of tea, or ſome light breakfaſt in bed. Pregnant women who are afflicted with vomiting, ought to be kept eaſy both in body and mind. They ſhould neither allow their ſtomachs to be quite empty, nor ſhould they eat much at once. Cold water is a very good drink in this caſe; if the ſtomach be weak, a little brandy may be added to it. If the ſpirits be low, and the perſon apt to faint, a ſpoonful of cinnamon-water, with a little marmalade of quinces or oranges, may be taken.

If vomiting proceeds from weakneſs of the ſtomach, bitters will be of ſervice, as the Gentian root, camomile and ſnake-root, infuſed in brandy

or wine. To theſe may be added as much rhubarb as will keep the belly gently open. The Jeſuits bark is likewiſe an excellent medicine for bracing and ſtrengthening the ſtomach. It may be drank in form of tea, or infuſed in wine or brandy, &c. The elixir of vitriol is alſo a good medicine in this caſe. It may be taken in the doſe of fifteen or twenty drops, twice or thrice a-day, in a glaſs of wine or water.

A vomiting which proceeds from acidities in the ſtomach, is relieved by alkaline purges. The beſt medicine of this kind, is the magneſia alba, a teaſpoonful of which may be taken in a diſh of tea, or a little milk, twice or thrice a-day, or oftener if neceſſary, to keep the belly open.

When vomiting proceeds from violent paſſions, or affections of the mind, all kind of evacuations muſt be avioded, eſpecially vomits. Theſe are exceedingly dangerous. The patient, in this caſe, ought to be kept perfectly eaſy and quiet, to have the mind ſoothed, and to take ſome gentle cordial, as negus, or a little brandy and water. A few drops of liquid laudanum may likewiſe be taken, to calm the ſpirits, and take off the irritation upon the nerves.

When vomiting proceeds from ſpaſmodic affections of the ſtomach, muſk, caſtor, and other antiſpaſmodic medicines, are of uſe. Aromatic plaſters, have likewiſe a good effect. The ſtomach-plaſter of the London or Edinburgh Diſpenſatory, may be applied to the pit of the ſtomach, or rather a little towards the left ſide, ſo as to cover a part of the falſe ribs. Aromatic medicines may likewiſe be taken inwardly, as cinnamon-tea, mint-tea, wine with ſpiceries boiled in it, &c. The region of the ſtomach may be rubbed with æther, or, if that cannot be had, with ſtrong brandy, or other ſpirits. The belly ſhould be fomented with warm

warm water, or the patient immerſed up to the breaſt in a warm bath.

I have always found the ſaline draughts moſt effectual in ſtopping a vomiting, from whatever cauſe it proceeded. Theſe may be made by diſſolving a dram of the ſalt of tartar, in an ounce and a half of freſh lemon-juice, adding to it an ounce of peppermint-water, and half an ounce of cinnamon-water. This draught may be ſweetened with a little white ſugar, and taken in the act of efferveſcence. It muſt be repeated every two hours, or every hour, if the vomiting be very violent. I do not remember to have ſeen this medicine, when duly perſiſted in, fail to ſtop a vomiting.

As the leaſt motion will often bring on the vomiting again, even after it has been ſtopped, the patient muſt avoid all manner of action. His diet muſt be ſo regulated, as to ſit eaſy upon the ſtomach; and he ſhould take nothing that is hard of digeſtion. We do not, however, mean that the patient is to live upon ſlops. Solid food, in this caſe, often ſits eaſier on the ſtomach than liquids.

OF THE HEAD-ACH

The head-ach is produced by various cauſes, and attended with different ſymptoms, according to its different degrees, and the part where it is ſituated. When it is ſlight, and affects a particu-

lar

lar part of the head, it is called *Cephalalgia;* when the whole head is affected, *Cephalæa;* and when one ſide only, *Hemicrania.* A fixed pain in the fore-head, which may be covered with the end of the thumb, is called *Clavis hyſtericus.*

There are alſo other diſtinctions. Sometimes the pain is internal, ſometimes external; ſometimes it is an original diſeaſe, and at other times only ſymptomatic. When the head-ach proceeds from a hot bilious habit, the pain is very acute and throbbing, with a conſiderable heat of the part affected. When, from a cold phlegmatic habit, the patient complains of a dull heavy pain, and has a ſenſe of coldneſs in the part. This kind of head-ach is ſometimes attended with a degree of ſtupidity or folly.

Whatever obſtructs the free circulation of the blood through the veſſels of the head, may occaſion a head-ach. In perſons of a full habit, who abound with blood, or other humours, the head-ach often proceeds from the ſuppreſſion of cuſtomary evacuations; as bleeding at the noſe, ſweating of the feet, &c. It may likewiſe proceed from any cauſe that determines a greater flux of blood towards the head; as coldneſs of the extremities, hanging of the head, &c. Whatever prevents the return of the blood from the head, will likewiſe occaſion a head-ach; as looking long at any object obliquely, wearing any thing tight about the neck, &c.

When a head-ach proceeds from the ſtoppage of a running of the noſe, there is a heavy, obtuſe, preſſing pain in the fore-part of the head, in which there ſeems to be ſuch a weight, that the patient can ſcarcely hold it up. When it is occaſioned by the cauſtic matter of the venereal diſeaſe, it generally affects the ſkull, and often produces a *caries* of the bones.

Sometimes

Sometimes a head-ach proceeds from the repulſion, or retroceſſion of the morbific matter of the gout, the eryſipelas, the ſmall-pox, meaſles, itch, or other eruptive diſeaſes. A *hemicrania* generally proceeds from crudities or indigeſtion.

There is likewiſe a moſt violent, fixed, conſtant, and almoſt intolerable head-ach, which occaſions great debility, both of body and mind, prevents ſleep, diſturbs digeſtion, deſtroys the appetite, cauſes a *vertigo*, dimneſs of ſight, a noiſe in the ears, convulſions, epileptic fits, and ſometimes vomiting, coſtiveneſs, coldneſs of the extremities, &c.

The head-ach is often ſymptomatic in continual and intermitting fevers, eſpecially quartans. It is likewiſe a very common ſymptom of hyſteric and hypochondriac complaints.

An external pain of the head is ſeldom dangerous. When a head-ach attends an acute fever, with pale urine, it is an unfavourable ſymptom. In exceſſive head-achs, coldneſs of the extremities is a bad ſign. When the diſeaſe continues long, and is very violent, it often terminates in blindneſs, an apoplexy, deafneſs, a *vertigo*, the palſy, epilepſy, &c.

The cool regimen, in general, is to be obſerved in this diſeaſe. The diet ought to conſiſt of ſuch emollient ſubſtances, as will correct the acrimony of the humours, and keep the belly open; as apples boiled in milk, ſpinage, turnips, and ſuch like. The drink ought to be diluting; as barley-water, infuſions of mild mucilaginous vegetables, decoctions of the ſudorific woods *, &c. The feet and

* The decoction of woods is thus made: Take ſhavings of guaiacum wood, three ounces; raiſins of the ſun, ſtoned, two ounces; ſaſſafras wood, ſhaved, one ounce; liquorice ſliced, half an ounce. Boil the guaiacum and raiſins in an Engliſh gallon of water, over a gentle fire, to the conſumption of one half; adding towards the end, the ſaſſafras and liquorice. Strain the liquor, and having ſuffered it to ſettle for ſome time, pour off the clear liquor from the fæces. This may be taken at pleaſure for ordinary drink.

and legs ought to be kept warm, and frequently bathed in lukewarm water; the head ſhould be ſhaved, and bathed with water and vinegar. The patient ought, as much as poſſible, to keep an erect poſture, and not to lie with his head too low.

When the head-ach is owing to exceſs of blood, and in hot bilious conſtitutions, bleeding is neceſſary. The patient may be bled in the jugular vein, and the operation repeated, if there be occaſion. Cupping alſo, or the application of leeches to the temples, and behind the ears, may be of ſervice. Afterwards a bliſtering-plaſter may be applied to the neck, or behind the ears, or to any part of the head that is moſt affected. In ſome caſes it will be proper to bliſter the whole head. In perſons of a groſs habit, iſſues or perpetual bliſters will be of ſervice. The belly ought likewiſe to be kept open by gentle laxatives.

But when the head-ach proceeds from a copious vitiated *ſerum*, ſtagnating in the membranes, either within or without the ſkull, with a dull, heavy, continual pain, which will neither yield to bleeding nor gentle laxatives, then more powerful purgatives are neceſſary, as pills made of aloes, reſin of jalap, or the like. It will alſo be neceſſary, in this caſe, to bliſter the whole head, and to keep the back-part of the neck open for a conſiderable time, by a perpetual bliſter.

When the head ach is occaſioned by a ſtoppage of the running of the noſe, the patient ſhould frequently ſmell to a bottle of volatile ſalts; he may likewiſe take ſnuff, or any thing that will irritate the noſe, ſo as to promote a diſcharge from it; as the herb-maſtich, ground-ivy, &c.

A *hemicrania*, eſpecially a periodical one, is generally owing to a foulneſs in the ſtomach, for which gentle vomits will be beneficial, as alſo purges of rhubarb. After the bowels have been ſufficiently

ficiently cleared, chalybeate waters, and ſuch bitters as ſtrengthen the ſtomach, will be neceſſary*.

When the head-ach ariſes from a vitiated ſtate of the humours, as in the ſcurvy and venereal diſeaſe †, the patient, after proper evacuations, muſt drink freely of the decoction of woods, recommended above, or the decoction of ſarſaparilla with raiſins and liquorice ‡. Theſe promote perſpiration, ſweeten the humours, and, if duly perſiſted in, will produce very happy effects. When a collection of matter is felt under the ſkin, it muſt be diſcharged by an inciſion, otherwiſe it will render the bone carious.

When the head-ach is ſo intolerable as to endanger the patient's life, or is attended with continual watching, delirium, &c. recourſe muſt be had to opiates. Theſe, after proper evacuation by clyſters, or mild purgatives, may be applied both externally and internally. The affected part may be rubbed with Bate's anodyne balſam, or a cloth dipped in it may be applied to the part. The patient may, at the ſame time, take twenty drops of laudanum, in a cup of valerian or pennyroyal tea, twice or thrice a-day. This is only to be done in caſe of extreme pain. Proper evacuations ought always to accompany and follow the uſe of opiates §.

When

* The Peruvian bark is a valuable medicine in this caſe. Indeed it may almoſt be conſidered as a *ſpecific*, in periodical head-achs.

† In this caſe, we believe, no medical practitioner would expect to cure the head-ach, till he had firſt cured the original diſeaſe by a complete courſe of mercury.

‡ This is made by boiling three ounces of freſh ſarſaparilla, an ounce of raiſins, and half an ounce of liquorice, in three Engliſh quarts of water to one. The liquor muſt be ſtrained, and an Engliſh pint of it drank daily.

§ Æther applied on the palm of the hand, to the part affected, and held there till it evaporate, often relieves the pain.

When the patient cannot bear the loſs of blood, his feet ought frequently to be bathed in luke-warm water, and well rubbed with a coarſe cloth. Cataplaſms with muſtard or horſe-radiſh ought likewiſe to be applied to them. This courſe is peculiarly neceſſary when the pain proceeds from a gouty humour affecting the head.

When the head-ach is occaſioned by great heat, hard-labour, or violent exerciſe of any kind, it may be allayed by cooling medicines; as the ſaline draughts with nitre, &c.

OF THE TOOTH-ACH.

This diſeaſe is ſo well known, that it needs no deſcription. It has great affinity with the rheumatiſm, and often ſucceeds pains of the ſhoulders and other joints.

It may proceed from various cauſes; as obſtructed perſpiration or catching cold; or from any of the common cauſes of inflammation. I have often known the tooch-ach occaſioned by neglecting ſome part of the uſual coverings of the head, by ſitting with the head bare near an open window, or its being any how expoſed to a draught of cold air. Food or drink taken either too hot or too cold, is very hurtful to the teeth. Great quantities of ſugar, or other ſweet-meats, are likewiſe hurtful. Nothing is more deſtructive to the teeth than cracking nuts, or chewing any kind of hard

hard ſubſtances. Picking the teeth with pins, needles, or with any thing that may hurt the enamel with which they are covered, does great miſchief; as the tooth is ſure to be ſpoiled whenever the air gets into it. Pregnant women are very ſubject to the tooth-ach, eſpecially during the firſt three or four months of pregnancy. The tooth-ach often proceeds from ſcorbutic humours affecting the gums. In this caſe the teeth are ſometimes waſted, and fall out without any conſiderable degree of pain. The proximate or immediate cauſe of the tooth-ach is a rotten or *carious* tooth.

In order to relieve the tooth-ach, we muſt endeavour to draw off or divert the humours from the part affected. This may be done by mild purgatives, bleeding, and bathing the feet frequently in warm water. The perſpiration ought likewiſe to be promoted, by drinking freely of weak wine-whey, or other diluting liquors, with ſmall doſes of nitre. Vomits too have often an exceeding good effect in the tooth-ach. It is ſeldom ſafe to adminiſter opiates, or any kind of heating medicines, or even to draw a tooth, till proper evacuations have been premiſed; and theſe alone will often effect the cure.

Next to evacuations, we recommend fomenting the part with warm water, or decoctions of emollient vegetables. Bags filled with boiled camomile-flowers, flowers of elder, or the like, may be applied to the part affected, with as great a degree of warmth as the patient can bear, and renewed as they grow cool. The patient may likewiſe receive the ſteams of warm water into his mouth, through an inverted funnel, or by holding his head over the mouth of a porringer filled with warm water, &c.

Gargles are likewiſe of uſe to make a diſcharge from the part. Rob of elder diſſolved in ſmall beer

beer makes a very proper gargle, or an infuſion of ſage or mulberry leaves.

Such things as promote the diſcharge of ſaliva, or cauſe the patient to ſpit, are always proper. For this purpoſe, bitter, hot, or pungent vegetables, may be chewed; as gentian, calamus-aromaticus, or pellatory of Spain. Allen recommends the root of *yellow-water flower de luce* in this caſe. This root may either be rubbed upon the tooth or chewed. Brookes ſays, he hardly ever knew it fail to eaſe the tooth-ach.

Many other herbs, roots, and ſeeds, &c. are recommended for curing the tooth-ach; as the leaves or roots of millefoil or yarrow chewed, tobacco ſmoaked or chewed, or the aſhes put into the hollow tooth, ſtaves acre, or the ſeeds of muſtard chewed, &c. Theſe bitter, hot, and pungent things, by occaſioning a great flow of *ſaliva*, frequently give eaſe in the tooth ach.

Opiates often relieve the tooth-ach. For this purpoſe, a little cotton wet with laudanum may be held between the teeth; or a piece of ſticking-plaſter, about the bigneſs of a ſixpence, with a bit of opium in the middle of it, of a ſize not to prevent the ſticking of the other, may be laid on the temporal artery, where the pulſation is moſt ſenſible. *De la Motte* affirms, that there are few caſes wherein this will not give relief. If there be a hollow tooth, a ſmall pill made of equal quantities of camphire and opium, put into the hollow, is often beneficial. When this cannot be had, the hollow-tooth may be filled with gum-maſtich, wax, lead, or any ſubſtance that will ſtick in it, and keep the external air out.

Few applications give more relief in the tooth-ach than bliſtering-plaſters. Theſe may be applied betwixt the ſhoulders, but they have the beſt effect when put behind the ears, and made ſo large

large as to cover a part of the lower jaw. Burning the nerve, within the affected tooth, with a hot iron, has frequently given eaſe; but this operation ought to be done with care. Applying a hot iron to the *antetragus*, or what is called *the inner bar of the ear*, is likewiſe a noted cure for the tooth-ach. Bliſtering, however, is more ſafe than either of theſe, and is not leſs efficacious.

Hoffman ſays, when every thing elſe failed, that he had often great ſucceſs from the following pills.

Take of aromatic pill one dram, ſtorax pill half a dram, extract of ſaffron ſix grains. Make them into nine pills; of which ſix or eight are to be taken at bed-time for a doſe.

After all, when a tooth is carious, it is often impoſſible to remove the pain, without drawing the tooth; and, as a ſpoiled tooth never becomes ſound again, it is prudent to draw it ſoon, leſt it ſhould affect the reſt. Tooth-drawing, like bleeding, is very much practiſed by mechanics, as well as perſons of the medical profeſſion. The operation, however, is not without danger, and ought always to be done with care. A perſon unacquainted with the ſtructure of the parts, will be in danger of breaking the jaw-bone, or of drawing a ſound tooth, inſtead of a rotten one, &c.

When a ſound tooth has been drawn, if it be replaced immediately, it will grow in again. It is now a common practice, to draw a rotten tooth, and put a ſound one, taken from the mouth of ſome other perſon, in its place. It is likewiſe an eaſy matter to fix artificial teeth ſo neatly, as to anſwer moſt of the purpoſes of the natural; but theſe are matters which do not properly fall under our conſideration.

When the tooth-ach returns periodically, and

the pain chiefly affects the gums, it may be cured by the bark.

Some pretend to have found great benefit in the tooth-ach, from the application of an artificial magnet to the affected tooth. We shall not attempt to account for its mode of operation, but, if it be found to answer, though only in particular cases, it certainly deserves a trial, as it is attended with no expence, and cannot do any harm.

Persons who have returns of the tooth-ach at certain seasons, as spring and autumn, might often prevent it by taking a dose of physic at these times.

Keeping the teeth clean, has no doubt a tendency to prevent the tooth-ach. The best method of doing this, is to wash them daily with salt and water, or with cold water alone. All brushing and scraping of the teeth is dangerous, and, unless it be performed with great care, must do mischief.

OF THE EAR-ACH.

This disorder chiefly affects the membrane which lines the inner cavity of the ear, called the *Meatus Auditorius*. It is often so violent, as to occasion great restlessness and anxiety, and even delirium. Sometimes epileptic fits, and other convulsive disorders, have been brought on by extreme pain in the ear.

The ear-ach may proceed from any of the causes which produce inflammation. It often proceeds from

from a ſudden ſuppreſſion of perſpiration, or from the head being expoſed to cold, when covered with ſweat. It may alſo be occaſioned by worms, or other inſects getting into the ear, or being bred there; or from any hard body ſticking in the ear. Sometimes it proceeds from the tranſlation of morbific matter to the ear. This often happens in the decline of malignant fevers, and occaſions deafneſs, which is generally reckoned a favourable ſymptom.

When the ear-ach proceeds from inſects, or any hard body ſticking in the ear, every method muſt be taken to remove them as ſoon as poſſible. The membranes may be relaxed by dropping into the ear, oil of ſweat almonds, or olive-oil. Afterwards, the patient ſhould be made to ſneeze, by taking ſnuff, or ſome ſtrong ſternutatory. If this ſhould not force out the body, it muſt be extracted by art. I have ſeen inſects, which had got into the ear, come out of their own accord, upon pouring in oil upon them, which is a thing they cannot bear.

When the pain of the ear proceeds from inflammation, it muſt be treated like other topical inflammations, by a cooling regimen and opening medicines. Bleeding at the beginning, either in the arm or jugular vein, or cupping in the neck, will be proper. The ear may likewiſe be fomented with ſteams of warm water, or flannel-bags filled with boiled mallows; and camomile-flowers, may be applied to it warm, or bladders filled with warm milk and water. An exceeding good method of fomenting the ear, is to apply it cloſe to the mouth of a jug, filled with a ſtrong decoction of camomile-flowers.

The patient's feet ſhould be frequently bathed in lukewarm water, and he ought to take ſmall doſes of nitre and rhubarb, viz. a ſcruple of the

former, and ten grains of the latter, three times a-day. His drink may be whey, or decoctions of barley and liquorice, with figs or raiſins, &c. The parts behind the ear ought frequently to be rubbed with camphorated oil, or the volatile liniment; and a few drops of the camphorated ſpirit of wine may be put into the ear, with wool or cotton *.

When the inflammation cannot be reſolved, a poultice of bread and milk, or roaſted onions, may be applied to the ear, and frequently renewed, till it breaks, or the abſceſs can be opened. Afterwards the humours may be diverted from the part by gentle laxatives, bliſters, or iſſues; but the diſcharge muſt not be ſuddenly dried up by any external application.—I have often known the ſudden drying of a running of the ear produce fatal conſequences.

OF THE HEART-BURN.

What is called the *Heart-burn*, is not a diſeaſe of that organ, but an uneaſy ſenſation of heat, or acrimony about the pit of the ſtomach, which is ſometimes attended with anxiety, naufea, and vomiting.

It may proceed from indigeſtion; from the acidity of the fluids, or contents of the ſtomach; or from bilious humours. Stale liquors, vinegar, greaſy aliment,

* A bliſter, if applied early, behind the ear, will commonly remove this complaint.

aliment, wind, &c. will cauſe the heart-burn. In ſome conſtitutions, it is occaſioned by the uſe of acids, and in others by aromatics. Pregnant women are very ſubject to it.

When the heart-burn proceeds from indigeſtion, or a foul ſtomach, the patient ought to take a vomit, and afterwards a purge. After the ſtomach has been cleanſed, he may drink twice or thrice a-day, a cup of camomile tea, with fifteen or twenty drops of elixir of vitriol in it, in order to ſtrengthen the ſtomach, and promote digeſtion.

When acidity or ſourneſs of the ſtomach occaſions the heart-burn, abſorbents are the proper medicines. In this caſe, chalk and water, or what is called the Chalk-julep, often anſwers very well. It is made by mixing an ounce of powdered chalk, half an ounce of fine ſugar, and a quarter of an ounce of gum-arabic, in two Engliſh pints of water. A tea-cupful of this may be taken at pleaſure. When the gum-arabic cannot be had, the chalk may be mixed with milk, or taken in water alone. The teſtacious powders are very proper here. A tea-ſpoonful of prepared oyſter-ſhells, or the powder called crab's eyes, may be taken in a glaſs of peppermint water, or ſimple cinnamon-water, as often as there is occaſion.

But the ſafeſt abſorbent which we know is the *magneſia alba*. This not only acts as an abſorbent, but, by its purging quality, cleanſes the bowels; whereas the chalk, and other abſorbents of that ſort, are apt to lie in the inteſtines, and occaſion obſtructions. This powder is no way diſagreeable, and may be taken in a cup of tea, a little milk, or a glaſs of peppermint-water. A large tea-ſpoonful is the uſual doſe, but there is no danger in taking a much greater quantity, and it may be repeated as often as is found neceſſary.

When the heart-burn proceeds from bilious hu-

mours, a tea-ſpoonful of the ſweat ſpirits of nitre, in a glaſs of water, or a cup of tea or coffee, will generally give eaſe. If it be cauſed by fat or greaſy aliments, a dram of brandy, or rum may be taken.

If wind be the cauſe of this complaint, the medicines called Carminatives are proper; as aniſeeds, juniper-berries, cardamom-ſeeds, &c. Theſe may either be chewed, or a glaſs of their diſtilled waters taken at pleaſure. Theſe, and other warm aromatics, as ginger, cannella alba, &c. give eaſe; but they ought never to be uſed unleſs when neceſſary. They are only drams in a dry form, and very pernicious to the ſtomach. One of the ſafeſt medicines of this kind, is the tincture made by infuſing an ounce of rhubarb, and a quarter of an ounce of the leſſer cardamoms, in an Engliſh pint of brandy. This muſt digeſt for two days; afterwards it ſhould be ſtrained, and four ounces of white ſugar-candy in powder added to it. It muſt ſtand to digeſt again, till the ſugar be diſſolved. A table-ſpoonful may be taken for a doſe.

I have frequently known the heart-burn cured by the patient chewing green tea.

PAIN OF THE STOMACH.

This may proceed from various cauſes; as indigeſtion, wind, the acrimony of the bile, or from ſharp, acrid, or poiſonous ſubſtances taken into the ſtomach.

ſtomach. It may likewiſe proceed from worms, the ſtoppage of cuſtomary evacuations, or from a tranſlation of gouty matter to the ſtomach, &c.

Women, in the decline of life, are very liable to this diſeaſe, eſpecially ſuch as are afflicted with hyſteric complaints. It is likewiſe very common to hypochondriac men of a ſedentary and luxurious life. In ſuch perſons, it often proves ſo extremely obſtinate, as to baffle all attempts of medicine.

When the pain of the ſtomach is moſt violent after eating, there is reaſon to ſuſpect, that it proceeds from ſome fault, either in the digeſtion or the food. In this caſe, the patient ought to change his diet, till he finds what kind of food agrees beſt with his ſtomach, and ſhould continue chiefly to uſe that. If a change of diet does not remove the complaint, the patient may take a gentle vomit, and afterwards a doſe or two of rhubarb. He ought likewiſe to take an infuſion of camomile-flowers, or ſome other ſtomachic bitter, either in wine or water. I have often known exerciſe remove this complaint, eſpecially ſailing, or a long journey on horſeback, or in a machine.

When a pain of the ſtomach proceeds from flatulencies, the patient is conſtantly belching up wind, and feels an uneaſy diſtenſion of the ſtomach after meals. This is a moſt deplorable diſeaſe, and is ſeldom cured. In general, the patient ought to avoid all windy diet, and every thing that ſours on the ſtomach, as greens, roots, &c. This rule, however, admits of ſome exceptions. I have known ſeveral inſtances of perſons very much troubled with wind, who received great benefit from eating parched peas *, though that

* Theſe are prepared by ſteeping or ſoaking peas in water, and afterwards drying them in a pot or kiln, till they be quite hard. They may be uſed at pleaſure.

grain is well known to be of a windy nature. This complaint may likewiſe be greatly relieved by exerciſe, eſpecially digging, walking, or riding, &c. I have found the elixir of vitriol anſwer very well in flatulencies. It may be taken as already directed.

When a pain of the ſtomach is occaſioned by the ſwallowing of acrid or poiſonous ſubſtances, they muſt be diſcharged by vomit; this may be excited by butter, oils, or other ſoft things, which ſheath and defend the ſtomach from the acrimony of its contents *.

When pain of the ſtomach proceeds from a tranſlation of gouty matter, warm cordials are neceſſary. Some have drank a whole bottle of brandy or rum, in this caſe, in a few hours, without being in the leaſt intoxicated, or even feeling the ſtomach warmed by it. Generous wines, however, are more ſafe, as genuine Madeira, &c. It is impoſſible to aſcertain the quantities neceſſary upon theſe occaſions. This muſt be left to the feelings and diſcretion of the patient. It is, however, the ſafer way not to go too far. When there is an inclination to vomit, it may be promoted by drinking an infuſion of camomile-flowers, or *carduus benedictus*.

If a pain of the ſtomach proceeds from the ſtoppage of cuſtomary evacuations, bleeding will, in ſome caſes, be neceſſary, eſpecially in ſanguine and very full habits. It will likewiſe be of uſe to keep the belly gently open, by mild purgatives; as rhubarb or ſenna, &c. When this diſeaſe affects women in the decline of life, after the ſtoppage

* The ſafeſt remedy in this caſe, is certainly a powerful emetic, half a dram, for inſtance, of white vitriol; or even half a dram of ipecacuanha, to be wrought off by inſtantly drinking an infuſion of camomile-tea, or taking a baſon of warm water, with a tea-ſpoonful of table-muſtard diffuſed in it.

page of the *menſes*, making an iſſue in the leg or arm will be of peculiar ſervice.

When the diſeaſe is occaſioned by worms, they muſt be deſtroyed, or expelled by ſuch means as are recommended in the following ſection.

OF WORMS.

These are chiefly of three kinds, viz. the *tænia*, or tape-worm; the *teres*, or round and long worm, and the *aſcarides*, or round and ſhort worm. There are many other kinds of worms found in the human body; but as they proceed, in a great meaſure, from ſimilar cauſes, have nearly the ſame ſymptoms, and require almoſt the ſame method of cure, we ſhall not ſpend time in enumerating them.

The tape-worm is white, very long, and all over jointed. It is generally bred either in the ſtomach or ſmall inteſtines. The round and long worm is likewiſe bred in the ſmall guts, and ſometimes in the ſtomach. The round and ſhort worms commonly lodge in the *rectum*, or what is called the End gut, and occaſion a diſagreeable itching about the *anus*.

The long round worms occaſion ſqueamiſhneſs, vomiting, an ill breath, gripes, looſeneſs, ſwelling of the belly, ſwoonings, loathing of food, and at other times a voracious appetite, a dry cough, convulſions,

convulſions, epilectic fits, and ſometimes a privation of ſpeech. Theſe worms have been known to perforate the inteſtines, and get into the cavity of the belly. The effects of the tape-worm are nearly the ſame with thoſe of the long and round, but rather more violent.

ANDRY ſays, the following ſymptoms particularly attend the *ſolium*, which is a ſpecies of the tape-worm, viz. ſwoonings, privation of ſpeech, and a voracious appetite. The round worms called *Aſcarides*, beſides an itching of the *anus*, cauſe ſwoonings, and teneſmus, or an inclination to go to ſtool.

CAUSES.——Worms may proceed from various cauſes; but they are ſeldom found, except in weak and relaxed ſtomachs, where the digeſtion is bad. Sedentary perſons are more liable to them, than the active and laborious. Thoſe who eat great quantities of unripe fruit, or who live much on raw herbs and roots, are generally ſubject to worms. There ſeems to be a hereditary diſpoſition in ſome perſons to this diſeaſe. I have often ſeen all the children of a family ſubject to worms of a particular kind. They ſeem likewiſe frequently to be owing to the nurſe. Children of the ſame family, nurſed by one woman, have often worms, when thoſe nurſed by another have none.

Children are more liable to this diſeaſe than adults, eſpecially after two years of age. Infants, while on the breaſt, are ſeldom troubled with worms. To this, however, there are ſeveral exceptions. I lately ſaw an inſtance of a child who paſſed worms before it was three months old. They were indeed of a very particular kind, being real caterpillars. Some of them were above an inch long; they had red heads, and were ſo briſk, as to jump about; they lived ſeveral days after the child had paſſed them. Another child ſuckled by

by the ſame woman, paſſed the ſame kind of worms when upon the breaſt, and both children ſuffered extremely before the worms came away.

SYMPTOMS.——The common ſymptoms of worms are, paleneſs of the countenance, and, at other times, an univerſal fluſhing of the face; itching of the noſe; (this, however, is doubtful, as children pick their noſes in all diſeaſes;) ſtarting, and grinding of the teeth in ſleep; the appetite ſometimes bad, at other times quite voracious; looſeneſs, a ſour or ſtinking breath, a hard ſwelled belly, great thirſt, the urine frothy, and ſometimes of a whitiſh colour; griping, or colic pains; an involuntary diſcharge of *ſaliva*, eſpecially when aſleep; frequent pains of the ſide, with a dry cough, and unequal pulſe; palpitations of the heart, ſwoonings, drowſineſs, cold ſweats, palſy, epilectic fits, with many other unaccountable nervous ſymptoms, which were formerly attributed to witchcraft, or the influence of evil ſpirits. Small bodies in the excrements, reſembling melon or cucumber ſeeds, are ſymptoms of the tape-worm.

Though this is a very common diſeaſe, yet it is leſs ſo than is generally imagined. Nurſes impute moſt of the diſeaſes of children to worms, and often give medicine to kill theſe vermin, where they do not exiſt. Even phyſicians are often deceived with reſpect to worms. I have frequently opened children who were thought to have been killed by them, and found none. In ſhort, there is no certain proof of worms exiſting in the inteſtines, but their being paſſed; and that will ſometimes happen, where no previous ſymptoms appeared.

MEDICINE.——Though numberleſs medicines are extolled for killing and expelling worms *, yet

* A medical writer of the preſent age has enumerated upwards of fifty Britiſh plants, all famous for killing and expelling worms out of the body.

yet no diſeaſe more frequently baffles the phyſician's ſkill. In general, the moſt proper medicines for their expulſion, are ſtrong purgatives; and to prevent their breeding, ſtomachic bitters, with now and then a glaſs of good wine.

The beſt purge for an adult, is jalap and calomel. Five and twenty, or thirty grains of the former, with ſix or ſeven of the latter, mixed in ſyrup, may be taken for a doſe. This ſhould be taken early in the morning. It will be proper, that the patient keep the houſe all day, and drink nothing cold. The doſe may be repeated once or twice a-week, for a fortnight or three weeks. On the intermediate days, the patient may take a dram of the powder of tin, twice or thrice a-day, mixed with ſyrup, honey, or treacle.

Thoſe who do not chuſe to take calomel, may make uſe of the bitter purgatives; as aloes, hiera picra, tincture of ſenna and rhubarb, &c.

Oily medicines are likewiſe of uſe for expelling worms. An ounce of ſalad oil, and a table-ſpoonful of common ſalt, may be taken in a glaſs of red port-wine, thrice a-day, or oftener, if the ſtomach will bear it. But the more common form of uſing oil is in clyſters. Oily clyſters, ſweetened with ſugar or honey, are very efficacious in bringing away the ſhort round worms, called *Aſcarides*.

The Harrowgate water is an excellent medicine for expelling worms, eſpecially the *aſcarides*. As this water evidently abounds with ſulphur, we may hence infer, that ſulphur alone muſt be a good medicine in this caſe; this is found to be true in fact. Many practitioners give flowers of ſulphur in very large doſes, and with great ſucceſs. It may be made into an electuary, with honey or treacle, and taken in ſuch quantity as to purge the patient.

Where Harrowgate water cannot be obtained,

ſea-

ſea-water may be uſed, which is far from being a contemptible medicine in this caſe. If ſea-water cannot be had, common ſalt may be diſſolved in water and drank. I have often ſeen this uſed by country-nurſes, when they ſuſpected their children were troubled with worms, with very good effect.

But worms, though expelled, will ſoon breed again, if the ſtomach remain weak and relaxed; to prevent this, we would recommend the Jeſuits bark. Half a dram of bark in powder may be taken in a glaſs of red port-wine, three or four times a-day, after the above medicines have been uſed. Lime water is likewiſe good for this purpoſe, or a table-ſpoonful of the chalybeate wine *, taken twice or thrice a-day. Infuſions or decoctions of bitter herbs, may likewiſe be drank: as the infuſion of tanſy, water-trefoil, camomile-flowers, tops of wormwood, the leſſer centaury, &c.

The above directions are calculated for adults; but for children the medicines muſt be more agreeable, and given in ſmaller doſes.

For a child of four or five years old, five grains of jalap, and two of calomel, may be mixed in a ſpoonful of ſyrup or honey, and given in the morning. The child ſhould keep the houſe all day, and have nothing cold. This doſe may be repeated twice a-week, for three or four weeks. On the intermediate days, the child may take a ſcruple of powdered tin, and ten grains of æthiops mineral, in a ſpoonful of treacle, twice a-day. Theſe doſes muſt be increaſed or diminiſhed, according to the age of the patient.

I

* The chalybeate wine is made by digeſting three ounces of filings of iron, and half a dram of cochineal, in two Engliſh pints of Rheniſh wine, for three weeks, frequently ſhaking the veſſel. Afterwards the liquor muſt be filtered.

I have frequently known thoſe big bellies, which in children are commonly reckoned a ſign of worms, quite removed by giving them white ſoap in their pottage, or other food. Tanſy, garlic, and rue, are all good againſt worms, and may be uſed various ways. We might here mention many plants, both for external and internal uſe; but think the powder of tin, with æthiops mineral, and the purges of jalap and calomel, are much more to be depended on. It will not, however, be amiſs to give a child who is troubled with worms, a glaſs of red wine, now and then, as every thing that braces and ſtrengthens the ſtomach, is good both for preventing and expelling theſe vermin.

Parents who would preſerve their children from worms, ought to allow them plenty of exerciſe in the open air, to ſee that their food be wholeſome and ſufficiently ſolid, and, as far as poſſible, to prevent their eating raw herbs, roots, or green traſhy fruits *.

OF

* We think it neceſſary here to warn people of their danger who buy worm-cakes and powders at random from quacks, and give them to their children without proper care. The principal ingredient in moſt of theſe medicines is mercury, which is never to be trifled with. I lately ſaw a ſhocking inſtance of the danger of this conduct. A girl who had taken a doſe of worm-powder, bought of a travelling quack, went out, and I believe might be ſo imprudent as to drink cold water, during its operation. She immediately ſwelled, and died that very day, with all the ſymptoms of having been poiſoned.

OF THE JAUNDICE.

THIS diſeaſe is firſt obſervable in the white of the eye, which appears of a yellowiſh colour. Afterwards the whole ſkin puts on a yellow, and ſometimes a blackiſh appearance. The urine too is of a ſaffron hue, and dyes a white cloth, if put into it, of the ſame colour.

CAUSES.——The immediate cauſe of the jaundice is an obſtruction of the bile. The remote or occaſional cauſes are, the bites of poiſonous animals, as the viper, mad dog, &c. the bilious or hyſteric colic; violent paſſions, as grief, anger, &c. Strong purges or vomits, will likewiſe occaſion the jaundice. Sometimes it proceeds from obſtinate agues, or from that diſeaſe being prematurely ſtopped by aſtringent medicines. In infants, it is often occaſioned by the *meconium* not being ſufficiently purged off. Pregnant women are very ſubject to it. It is likewiſe a ſymptom in ſeveral kinds of fevers. Catching cold, or the ſtopping of cuſtomary evacuations, as the *menſes*, the bleeding piles, iſſues, &c. will occaſion the jaundice.

SYMPTOMS.——The patient at firſt complains of exceſſive wearineſs, and has great averſion to any kind of motion. His ſkin is dry, and he generally feels a kind of itching or pricking pain over the whole body. The ſtools are of a whitiſh or clay colour, and the urine, as was obſerved above, is yellow. The breathing is difficult, and the patient complains of an unuſual load or oppreſſion on his breaſt. There is a heat in the noſtrils,

ſtrils, a bitter taſte in the mouth, loathing of food, ſickneſs at the ſtomach, vomiting, flatulency, and frequently all objects appear to the eye of a yellow colour.

If the patient be young, and the diſeaſe complicated with no other malady, it is ſeldom dangerous; but in old people, where it continues long, returns frequently, or is complicated with the dropſy or hypochondriac ſymptoms, it generally proves fatal. The black jaundice is more dangerous than the yellow.

REGIMEN.——The diet ſhould be cool, light, and diluting, conſiſting chiefly of ripe fruits and mild vegetables; as apples boiled or roaſted, ſtewed prunes, preſerved plumbs, boiled ſpinage, &c. Veal or chicken-broth, with light bread, are likewiſe very proper. The drink ſhould be buttermilk, whey ſweetened with honey, or decoctions of cool opening vegetables; as marſh-mallow roots, with liquorice, &c.

The patient ſhould take as much exerciſe as he can bear, either on horſe-back, or in a machine; walking, running, and even jumping, are likewiſe proper, provided he can bear them without pain, and there be no ſymptoms of inflammation. Patients have been often cured of this diſeaſe, by a long journey, after medicines had proved ineffectual.

Amuſements are likewiſe of great uſe in the jaundice. The diſeaſe is often occaſioned by a ſedentary life, joined to a dull melancholy diſpoſition. Whatever therefore tends to promote muſcular motion, and to cheer the ſpirits, muſt have a good effect; as dancing, laughing, ſinging, &c.

MEDICINE.——If the patient be young, of a full ſanguine habit, and complains of pain in the right ſide, about the region of the liver, bleeding will

will be neceſſary *. After this, a vomit muſt be adminiſtered; and if the diſeaſe proves obſtinate, it may be repeated once or twice. No medicines are more beneficial in the jaundice than vomits, eſpecially where it is not attended with inflammation. Half a dram of ipecacuanha in powder will be a ſufficient doſe for an adult. It may be wrought off with weak camomile-tea, or lukewarm water.

The belly muſt likewiſe be kept open by mild purgatives. Caſtile ſoap, if taken in ſufficient quantities, anſwers this purpoſe extremely well. It may be taken from half an ounce to an ounce daily, for a conſiderable time. As few people have reſolution to ſwallow ſuch large quantities of ſoap, I generally give pills made of ſoap, aloes, and rhubarb, which anſwer the ſame intention in a ſmaller doſe. They may be prepared in the following manner:

Take ſocotrine aloes and Turkey rhubarb in powder, of each a dram, Caſtile ſoap an ounce. Beat them all together, with a little ſyrup, into a proper conſiſtence for pills. Let them be formed into pills of an ordinary ſize, and five or ſix of them taken three times a-day. They muſt be continued for ſome time, and the quantity regulated by the patient's ſtools, of which he ought at leaſt to have one or two every day.

Fomenting the parts about the region of the ſtomach and liver, and rubbing them with a warm hand or fleſh-bruſh, are likewiſe beneficial; but it is ſtill more ſo for the patient to ſit in a veſſel of warm water up to the breaſt. He ought to do this frequently, and ſhould continue in it as long as his ſtrength will permit.

* Where the ſymptoms of pain and inflammation are violent, bleeding will be proper; but where theſe are moderate at firſt, or have been rendered ſo by bleeding, an opiate, given in a full doſe, will ſeldom fail to give immediate relief.

Many dirty things are recommended for the cure of the jaundice; as lice, the millepedes, &c. But theſe do more harm than good, as people truſt to them, and neglect more valuable medicines; beſides, they are ſeldom taken in ſufficient quantity to produce any effects. People always expect that theſe *out-of-the way things* ſhould act as charms, and conſequently ſeldom perſiſt in the uſe of them. Vomits, purges, fomentations, and exerciſe, will ſeldom fail to cure the jaundice when it is a ſimple diſeaſe; and when complicated with the dropſy, or other chronic complaints, it is hardly to be cured by any means.

Numberleſs Britiſh herbs are extolled for the cure of this diſeaſe. Dr Short, in his *Medicina Britannica*, mentions near a hundred, all famous for curing the jaundice. The fact is, this diſeaſe often goes off of its own accord; in which caſe, the laſt medicine is ſaid to have performed the cure. I have, however, ſeen conſiderable benefit, in a very obſtinate jaundice, from a decoction of hemp-ſeed. Four ounces of the ſeed may be boiled in two Engliſh quarts of ale, and ſweetened with coarſe ſugar. The doſe is half an Engliſh pint every morning. It may be continued for eight or nine days.

I have known Harrowgate water cure a very obſtinate jaundice. I have known patients, after taking many medicines without effect, go thither in the middle of winter, and in a few weeks return quite well. They both drank the ſulphur water, and bathed.

OF

OF THE DROPSY.

THE dropſy is a preternatural ſwelling of the whole body, or ſome part of it, occaſioned by a collection of watery humour. It is diſtinguiſhed by different names, according to the part affected, as the *anaſarca*, or a collection of water under the ſkin; the *aſcites*, or a collection of water in the belly; the *hydrops pectoris*, or dropſy of the breaſt; the *hydrocephalus*, or dropſy of the brain, &c.

CAUSES.——A very common cauſe of the dropſy is a hereditary diſpoſition. It may likewiſe proceed from drinking ardent ſpirits, or other ſtrong liquors. It is true, almoſt to a proverb, that great drinkers die of a dropſy. The want of exerciſe is alſo a very common cauſe of the dropſy. Hence it is juſtly reckoned among the diſeaſes of the ſedentary. It often proceeds from exceſſive evacuations, as frequent and copious bleedings, ſtrong purges often repeated, frequent ſalivations, &c. The ſudden ſtoppage of cuſtomary or neceſſary evacuations, as the *menſes*, the hæmorrhoids, or fluxes of the belly, may likewiſe cauſe a dropſy.

I have often known the dropſy occaſioned by drinking large quantities of cold, weak, watery liquor after violent exerciſe, while the body was hot. A low, damp, or marſhy ſituation is likewiſe a frequent cauſe of it. Hence it is a common diſeaſe in moiſt, flat, fenny countries. It may alſo be brought on by a long courſe of poor watery diet, or the uſe of viſcous aliment that is hard of digeſtion. It is often the effect of other diſeaſes, as

the jaundice, a ſchirrus of the liver, a violent ague of long continuance, a diarrhœa, a dyſentery, an empyema, or a conſumption of the lungs. In ſhort, whatever obſtructs the circulation of the blood, or prevents its being duly prepared, may occaſion a dropſy.

SYMPTOMS.——This diſeaſe gnerally begins with a ſwelling of the feet and ankles towards night, which, for ſome time, diſappears in the morning. In the evening the parts, if preſſed with the finger, will pit. The ſwelling gradually aſcends until the whole body at length becomes affected. Afterwards the breathing becomes difficult, the urine is in ſmall quantity, and the thirſt great, the belly is bound, and the perſpiration is greatly obſtructed. To theſe ſucceed torpor, heavineſs, a ſlow waſting fever, and a troubleſome cough. This laſt is generally a fatal ſymptom, as it ſhews the lungs to be affected *.

When the diſeaſe comes ſuddenly on, and the patient is young and ſtrong, there is reaſon to hope for a cure, eſpecially if medicine be given early. But if the patient be old, has led an irregular or a ſedentary life, or if there be reaſon to ſuſpect that the liver, lungs, or any of the viſcera are unſound, there is great ground to fear that the conſequences will prove fatal.

REGIMEN.——The patient muſt abſtain, as much as poſſible, from all drink, eſpecially weak and watery liquors, and muſt quench his thirſt with acids, as juice of lemons, oranges, ſorrel †, &c. His

* An aſcites, beſide more or leſs of the above ſymptoms, is attended with a diſtenſion and ſwelling of the belly, and with a ſenſe of the fluctuation of a fluid upon preſſure.

† This reſtriction in the uſe of drink being in itſelf a painful meaſure, and ſeldom alſo attended with any good effect, is now generally taken off. Indeed it has been often found, that an increaſe in the quantity of drink taken, has been attended with a proportional increaſe

His aliment ought to be dry, of a heating and diuretic quality, as toaſted bread, the fleſh of birds, or other wild animals, roaſted; pungent and aromatic vegetables, as garlic, muſtard, onions, creſſes, horſe-radiſh, rocambole, ſhalot, &c. He may alſo eat ſea-biſcuit dipt in wine or a little brandy. This is not only nouriſhing, but tends to quench thirſt. Some have been actually cured of a dropſy by a total abſtinence from all liquids. and living entirely upon ſuch things as are mentioned above. If the patient muſt have drink, the Spaw water, or Rheniſh wine, with diuretic medicines infuſed in it, are the beſt.

Exerciſe is of the greateſt importance in a dropſy. If the patient be able to walk, run, dance, or jump about, he ought to continue theſe exerciſes as long as he can. If he be not able to walk, &c. he muſt ride on horſeback, or in a machine, and the more violent the motion ſo much the better, provided he can bear it. His bed ought to be hard, and the air of his apartments warm and dry. If he live in a damp country, he ought to be removed into a dry one, and, if poſſible, into a warmer climate. In a word, every method muſt be taken to promote the perſpiration and to brace the ſolids. For this purpoſe, it will likewiſe be proper to rub the patient's body, two or three times a-day, with a hard cloth or the fleſh-bruſh, and he ought conſtantly to wear flannel next his ſkin.

MEDICINE.——If the patient be young, his conſtitution good, and the diſeaſe has come on ſuddenly, it may generally be removed by ſtrong vomits, briſk purges, and ſuch medicines as promote a diſcharge of ſweat and urine. For an adult,

increaſe in the quantity of urine that is made: and whenever a cure of this diſeaſe is attempted by means of diuretics, liquids muſt be adminiſtered in conſiderable quantity to determine theſe with more certain effect to the kidneys.

half a dram of ipecacuanha in powder, and half an ounce of oxymel of ſquills, will be a proper vomit *. This may be repeated three or four times, if neceſſary, three or four days intervening betwixt each doſe. The patient muſt not drink much after the vomit, otherwiſe he deſtroys its effect. A cup or two of camomile-tea will be ſufficient to work it off.

Betwixt each vomit, on one of the intermediate days, the patient may take the following purge. Take jalap in powder half a dram, cream of tartar two drams, calomel ſix grains. Theſe may be made into a bolus with a little ſyrup of pale roſes, and taken early in the morning. The leſs the patient drinks after it the better. If he be much griped, he may take now and then a cup of chicken-broth.

The patient may likewiſe take every night at bed-time the following bolus: Take four or five grains of camphor, one grain of opium, and as much ſyrup of orange-peel as is ſufficient to make them into a bolus. This will generally promote a gentle ſweat, which ſhould be encouraged by drinking now and then a ſmall cup of wine-whey, with a tea-ſpoonful of the ſpirits of hartſhorn in it.

The patient may take, three or four times a-day, a tea-cupful of the following infuſion: Take juniper-berries, muſtard-ſeed, and horſe-radiſh, of each half an ounce, aſhes of broom half a pound; infuſe them in a quart of Rheniſh wine or ſtrong ale for a few days, and afterwards ſtrain off the liquor. Such as cannot take this infuſion, may uſe the decoction of ſeneka-root, which is both diuretic and ſudorific.

As this diſeaſe is very apt to return; after the water has been drained off, to prevent its collecting again, the patient muſt continue to take exerciſe,

* Theſe are certainly rather ſtrong for *medium doſes*; and ſhould therefore be ventured on only by ſtrong athletick people.

ciſe, to uſe a dry diet, and ſuch medicines as ſtrengthen and brace the ſolids, as wine with ſteel or bark infuſed in it; warm and aromatic bitters are likewiſe proper, as the Virginian ſnake-root, *canella alba*, orange-peel, &c. infuſed in wine or brandy: The patient muſt avoid all great evacuations, and ought, if he can, to make choice of a dry warm ſituation.

The above courſe will often cure an incidental dropſy, if the conſtitution be good; but when the diſeaſe proceeds from a bad habit, or an unſound ſtate of the viſcera, ſtrong purges and vomits are not to be ventured upon. In this caſe, the ſafer courſe is to palliate the ſymptoms by the uſe of ſuch medicines as promote the ſecretions, and to ſupport the patient's ſtrength by warm and nouriſhing cordials.

The diſcharge of urine may be greatly promoted by nitre. Brookes ſays he knew a young woman who was cured of a dropſy by taking a dram of nitre every morning in a draught of ale, after ſhe had been given over as incurable. The powder of ſquills is likewiſe a good diuretic. Six or eight grains of it, with a ſcruple of nitre, may be given twice a-day in a glaſs of ſtrong cinnamon-water. Ball ſays, a large ſpoonful of unbruiſed muſtard-ſeed taken every night and morning, and drinking half an Engliſh pint of the decoction of the tops of green broom after it, has produced a cure, after other powerful methods had proved ineffectual *.

* Cream of tartar has been lately uſed with great ſucceſs in this diſeaſe. The beſt method of exhibiting it is in the form of a watery ſolution, to be uſed frequently, rather than in large quantities at a time, ſo as to leſſen its purgative effect, and determine it with more certainty to the kidneys. It may be taken in the extent of from half an ounce to an ounce and a half, diſſolved in from half a pound to a pound and a half of water, in the courſe of twenty-four hours. This muſt be continued for a length of time, or till the ſymptoms diſappear.

To promote perſpiration, the patient may uſe the decoction of ſeneka-root, as directed above; or he may take two ſpoonfuls of * Mindererus's ſpirit, in a cup of wine-whey, three or four times a-day. The ſaline draughts already recommended are likewiſe very proper in this caſe. Theſe medicines, with the regimen mentioned above, if they do not cure, will at leaſt alleviate the diſeaſe, which, in worn-out conſtitutions, is a ſafer courſe than attempting to extirpate it. When other means fail, recourſe muſt be had to tapping, which is a very ſafe and eaſy operation, though it ſeldom produces a radical cure †.

OF THE GOUT.

THERE is no diſeaſe which ſhews the imperfection of the medical art more than the gout. Nor does any malady ſhew the advantages of temperance and exerciſe in a ſtronger light. Few who pay a proper regard to theſe are troubled with the gout,

* This ſpirit is prepared by gradually pouring diſtilled vinegar upon any quanity of the volatile ſal-ammoniac till the effervescence ceaſes; occaſionally ſhaking the veſſel to promote the action of the vinegar on the ſalt.

† When the ſwelling in an anaſarca is ſo conſiderable as to occaſion great uneaſineſs from the diſtenſion, relief may be obtained by means of punctures. Theſe ſhould be made with the point of a lancet, of a ſmall ſize, and only through the ſkin into the cellular membrane. They ſhould not be made too near one another, for fear of inflammation; nor too low on the extremities, for fear of mortification.

gout, unleſs when it is hereditary. This points out the true ſource from whence that peſt originally ſprung, viz. *exceſs* and *idleneſs*. Few perſons are affected with the gout till the decline of life, except thoſe who inherit it from their parents. Men are more liable to it than women, eſpecially thoſe of a full groſs habit.

CAUSES.——One very common cauſe of the gout is a hereditary diſpoſition. Perſons who know themſelves to be tainted this way, ought therefore to guard againſt its attack, by ſteadily purſuing a courſe directly oppoſite to that which occaſions the diſeaſe. Full living, but eſpecially indulging in rich, pungent, or ſtimulating ſauces and generous wines, has a great tendency to bring on the gout. Intenſe thought, or application of the mind to obſtruſe ſubjects, particularly night-ſtudies, has likewiſe this effect. The plentiful uſe of acids, as ſour punch, pricked wines, &c. are alſo hurtful; but nothing more certainly induces this diſeaſe than exceſs of venery, eſpecially in the early period of life.

It may proceed from an obſtruction or defect of any of the uſual diſcharges, as the perſpiration, ſweating of the feet, the menſes, &c. A ſudden chilling of the feet after ſweat, or drying them at the fire after being wet and cold, are likewiſe bad. The modern cuſtom of eating a hot fleſh-ſupper, drinking warm ſtrong liquors after it, and ſitting up the greater part of the night, is one very great cauſe of the gout, and indeed of many other diſeaſes.

SYMPTOMS.——A fit of the gout is generally preceded by indigeſtion, drowſineſs, belching of wind, a ſlight head-ach, ſickneſs, and ſometimes vomiting. The patient complains of wearineſs and dejection of ſpirits, and has often a pain in the limbs, with a ſenſation as if wind or cold water were

were paſſing down the thigh. The appetite is often remarkably keen a day or two before the fit, and there is a ſlight pain in paſſing urine, and ſometimes an involuntary ſhedding of tears. Sometimes theſe ſymptoms are much more violent, eſpecially upon the near approach of the fit; and ſome obſerve, that as the fever which uſhers in the gout is, ſo will the fit be; if the fever be ſhort and ſharp, the fit will be ſo likewiſe; if it be feeble, long, and lingering, the fit will be ſuch alſo. But this obſervation can only hold with reſpect to very regular fits of the gout.

The regular gout generally makes its attack in the ſpring, or beginning of winter, in the following manner: About two or three in the afternoon, the patient is ſeized with a pain in his great toe, ſometimes in the heel, and at other times in the ancle or calf of the leg. This pain is accompanied with a ſenſation, as if cold water were poured upon the part, which is ſucceeded by a ſhivering, with ſome degree of fever. Afterwards the pain increaſes, and fixing among the ſmall bones of the foot, the patient feels all the different kinds of torture, as if the part were ſtretched, burnt, ſqueezed, gnawed, or torn in pieces, &c. The part at length becomes ſo exquiſitely ſenſible, that the patient cannot bear to have it touched, nor even ſuffer any perſon to walk acroſs the room.

The patient is generally in exquiſite torture for twenty-four hours, from the time of the coming on of the fit: He then becomes eaſier, the part begins to ſwell, appears red, and is covered with a little moiſture. Towards morning he drops aſleep, and generally falls into a gentle breathing ſweat. This terminates the firſt paroxyſm, a number of which conſtitutes a fit of the gout; which is longer or ſhorter according to the patient's age, ſtrength, the

the ſeaſon of the year, and the diſpoſition of the body to this diſeaſe.

The patient is always worſe towards night, and eaſier in the morning. The paroxyſms, however, generally grow milder every day, till at length the matter is diſcharged by perſpiration, urine, and the other evacuations. In ſome patients this happens in a few days; in others it requires weeks, and in ſome months, to finiſh the fit. Thoſe whom age and frequent fits of the gout have greatly debilitated, ſeldom get free of it before the approach of ſummer, and ſometimes not till it be pretty far advanced.

REGIMEN.——As there are no medicines, yet known, that will cure the gout, we ſhall confine our obſervations moſtly to regimen, both in and out of the fit.

In the fit, if the patient be young and ſtrong, his diet ought to be thin and cooling, and his drink of a diluting nature; but where the conſtitution is weak, and the patient has been accuſtomed to live high, this is not a proper time to retrench. In this caſe he muſt keep nearly to his uſual diet, and ſhould take frequently a cup of ſtrong negus, or a glaſs of generous wine. Wine-whey is a very proper drink in this caſe, as it promotes the perſpiration without heating the patient. It will anſwer this purpoſe better if a tea-ſpoonful of *ſal volatile oleoſum*, or ſpirits of harſhorn, be put into a cup of it twice or thrice a-day. It will likewiſe be proper for the patient to take at bed-time a tea-ſpoonful of the volatile tincture of *guaiacum*, in a large draught of warm wine-whey. This will greatly promote perſpiration through the night.

As we know no ſafe way of diſcharging the gouty matter but by perſpiration, this ought to be kept up by all means, eſpecially in the part affected. For this purpoſe the leg and foot affected ſhould

ſhould be wrapt in ſoft flannel, fur, or wool. The laſt is moſt readily obtained, and ſeems to anſwer the purpoſe as well, if not better, than any thing elſe. The people of Lancaſhire look upon wool as a kind of ſpecific in the gout. They wrap a great quantity of it combed about the leg and foot affected, and cover it with a ſkin of ſhamoy leather. This they ſuffer to continue for eight or ten days, and ſometimes for a fortnight or three weeks, or longer if the pain does not ceaſe. I never knew any external application anſwer ſo well in the gout. I have often ſeen it applied when the ſwelling and inflammation were very great, with violent pain; and have found all theſe ſymptoms relieved by it in a few days. The wool which they uſe is generally greaſed, and carded or combed. They chuſe the ſofteſt which can be had, and ſeldom or never remove it till the fit be entirely gone off.

The patient ought likewiſe to be kept quiet and eaſy during the fit. Every thing that affects the mind diſturbs the paroxyſm, and tends to throw the gout upon the nobler parts. For the ſame reaſon, all external applications that repel the matter are to be avoided as death. They do not cure the diſeaſe, but remove it from a ſafe to a more dangerous part of the body, where it often proves fatal. A fit of the gout is rather to be conſidered as Nature's method of curing a diſeaſe, than a diſeaſe itſelf, and all that we can do, with ſafety, is to promote her intentions, and to aſſiſt her in expelling the enemy in her own way. Evacuations by bleeding, ſtool, &c. are likewiſe hurtful. They do not remove the cauſe of the diſeaſe, and, by weakening the patient, they generally prolong the fit.

Many things will indeed ſhorten a fit of the gout, and ſome will drive it off altogether; but nothing has yet been found, which will do this with

with ſafety to the patient. In pain, we eagerly graſp at any thing that promiſes immediate eaſe, and even hazard life itſelf, for a momentary relief. This is the true reaſon why ſo many infallible remedies have been propoſed for the gout, and why ſuch numbers have loſt their lives by them. It would be as prudent to ſtop the ſmall-pox from riſing, and to drive them into the blood, as to attempt to repel the gout. The latter is as much an effort of Nature, to free herſelf from an offending cauſe, as the former, and ought equally to be promoted. In fine, there is no diſeaſe which Nature makes a greater effort to cure, than the gout; nor is it difficult to ſee which way her endeavours tend. She always attempts to throw the diſeaſe upon the extremities, and when that is accompliſhed, her work is half done. It may ſafely lodge there, till it be gradually expelled by the vital powers; and it cannot lodge ſafely any where elſe, nor be expelled in any other way.

After the fit is over, the patient ought to take a doſe or two of the bitter tincture of rhubarb, or ſome other warm ſtomachic purge. He ſhould alſo drink a weak infuſion of ſtomachic bitters, in ſmall wine or ale. as Gentian, with cinnamon or Virginian ſnake-root, and orange-peel. The diet at this time ſhould be light, but nouriſhing, and gentle exerciſe ſhould be taken on horſeback, or in a machine, &c.

Out of the fit, it is in the patient's power to do many things towards preventing a return of the diſorder, or rendering the fit, if it ſhould return, leſs ſevere. This, however, is not to be attempted by medicine. I have frequently known the gout kept off for ſeveral years, by the Jeſuits bark, and other tonic medicines; but in all the caſes where I had occaſion to ſee this tried, the perſons died ſuddenly, and, to all appearance, for want of a regular

regular fit of the gout. One would be apt, from hence, to conclude, that a fit of the gout, to ſome conſtitutions, in the decline of life, is rather ſalutary than hurtful.

Though it may be dangerous to ſtop a fit of the gout by medicine, yet, if the conſtitution can be ſo changed by diet and exerciſe, as to leſſen, or totally prevent its return, there certainly can be no danger in following ſuch a courſe. It is well known, that the whole humours may be ſo altered by a proper courſe of diet, as quite to eradicate this diſeaſe; and thoſe only who have reſolution enough to perſiſt in ſuch a courſe, have reaſon to expect a cure.

The courſe which we would recommend for preventing the gout, is as follows: In the firſt place, *univerſal temperance*. In the next place, plenty of *exerciſe*. By this, we do not mean ſauntering about in an indolent manner, but labour, ſweat, and toil. Theſe only can render the humours wholeſome, and keep them ſo. Going early to bed, and riſing by times, are of great importance. It is likewiſe proper to avoid night ſtudies, and all intenſe thought. The ſupper ſhould be light, and taken early. All ſtrong liquors, eſpecially generous wines and ſour punch, are to be avoided. Above all, we would recommend a milk-diet. The uſe of milk is not to be gone into all at once, but increaſed gradually, till it becomes the principal part of the diet.

We would likewiſe recommend ſome doſes of *magneſia alba*, and rhubarb, to be taken every ſpring and autumn; and afterwards a courſe of ſtomachic bitters, as tanſy, or water-trefoil tea, an infuſion of gentian and camomile-flowers, or a decoction of burdock-root, &c. Any of theſe, or an infuſion of any wholeſome bitter that is more agreeable to the patient, may be drank for two or three weeks,

weeks, twice a-day. An iſſue, or perpetual bliſter, has a great tendency to prevent the gout. If theſe were more generally uſed in the decline of life, they would not only often prevent the gout, but alſo many other maladies. Such as can afford to go to Bath, will find great benefit from bathing and drinking the water. It both promotes digeſtion and invigorates the habit.

When the gout attacks the head or lungs, every method muſt be taken to draw it towards the feet. They muſt be frequently bathed in warm water, and acrid cataplaſms applied to the ſoles. Bliſtering-plaſters ought likewiſe to be applied to the ancles or calves of the legs. Bleeding in the feet or ancles, is alſo neceſſary, and warm ſtomachic purges. The patient ought to keep in bed, for the moſt part, if there be any ſigns of inflammation, and ſhould be very careful not to catch cold *.

If it attacks the ſtomach, with a ſenſe of cold, the moſt warm cordials are neceſſary; as ſtrong wine warmed, with cinnamon or nutmeg in it, cinnamon-water, peppermint-water, and even brandy or rum. The patient ſhould keep in bed, and endeavour to promote a ſweat by drinking warm liquors; and if he ſhould be troubled with a nauſea, or inclination to vomit, he may drink camomile-tea, or ſmall poſſet.

When the gout attacks the kidneys, and imitates gravel-pains, the patient ought to drink freely of a decoction of marſh-mallows, and to have the parts fomented with warm water. An emollient clyſter ought likewiſe to be given, and afterwards an opiate. If the pain be very violent, thirty or forty

* In either of theſe caſes, beſide the application here mentioned to the feet, bleeding and bliſtering, on the part affected, are highly neceſſary and important.

forty drops of laudanum may be taken in a cup of the decoction.

Perſons who have had the gout, ſhould be very attentive to any complaints that may happen to them about the time when they have reaſon to expect a return of the fit. The gout imitates many other diſorders, and by being miſtaken for them, and treated accordingly, is often diverted from its proper courſe, to the great danger of the patient's life.

Thoſe who never had the gout, but who, from their conſtitution or manner of living, have reaſon to expect it, ought likewiſe to be very circumſpect with regard to its firſt approach. If the diſeaſe, by wrong conduct or improper medicines, be diverted from its proper courſe, the miſerable patient has a chance to be ever after tormented with head-achs, coughs, pains of the ſtomach and inteſtines; and generally falls, at laſt, a victim to its attack upon ſome of the more noble parts.

OF THE RHEUMATISM.

This diſeaſe has great affinity with the gout. It generally attacks the joints with exquiſite pain, and is ſometimes attended with inflammation and ſwelling. It is moſt common in the ſpring, and towards the end of autumn. It is uſually diſtinguiſhed into acute and chronic; or the rheumatiſm attended with a fever, and that which is not.

CAU-

CAUSES.——The cauſes of a rheumatiſm are frequently the ſame as thoſe of an inflammatory fever, viz. an obſtructed perſpiration, the immoderate uſe of ſtrong liquors, &c. Sudden changes of the weather, and all quick tranſitions from heat to cold, are very apt to occaſion the rheumatiſm. The moſt extraordinary caſe of a rheumatiſm that I ever ſaw, where almoſt every joint of the body was diſtorted, was in a man who uſed to work one part of the day by the fire, and the other part of it in the water. Very obſtinate rheumatiſms have likewiſe been brought on by perſons, not accuſtomed to it, allowing their feet to continue long wet. The ſame effects are often produced by wet clothes, damp beds, or lying upon the ground, eſpecially in the night.

The rheumatiſm may either be occaſioned by exceſſive evacuations, or the ſtoppage of uſual diſcharges. It is often the effect of chronic diſeaſes, which vitiate the humours; as the ſcurvy, the *lues venerea*, obſtinate autumnal agues, &c.

The rheumatiſm prevails moſt in low, damp, marſhy countries. It is likewiſe very common amongſt the poorer ſort of peaſants, who are ill clothed, live in low cold houſes, and eat coarſe unwholeſome food, which contains but little nouriſhment, and is not eaſily aſſimilated.

SYMPTOMS.——The *acute* rheumatiſm commonly begins with wearineſs, ſhivering, a quick pulſe, reſtleſſneſs, thirſt, and other ſymptoms of fever. Afterwards the patient complains of flying pains, which are increaſed by the leaſt motion. Theſe at length fix in the joints, which are often affected with ſwelling and inflammation. If blood be let in this diſeaſe, it has generally the ſame appearance as in the pleuriſy.

In this kind of rheumatiſm, the treatment of the patient is nearly the ſame as in an acute or inflam-

matory fever. If he be young and ſtrong, bleeding is neceſſary, and muſt be repeated according to the exigencies of the caſe. The belly ought likewiſe to be kept open by emollient clyſters, or cool opening liquors; as decoctions of tamarinds and liquorice, cream-of-tartar whey, &c. The diet ſhould be light, and in ſmall quantity, conſiſting chiefly of roaſted apples, groat-gruel, or very weak chicken-broth. After the feveriſh ſymptoms have abated, if the pain ſtill continues, the patient muſt keep his bed, and take ſuch things as promote perſpiration; as wine-whey with *ſpiritus Mindereri*, as before directed. The patient may likewiſe take, for a few nights, at bed-time, in a cup of wine-whey, a dram of cream of tartar, and half a dram of gum-guaiacum in powder *.

Warm bathing, after proper evacuations, has often an exceeding good effect. The patient may either be put into a bath of warm water, or have cloths wrung out of it applied to the parts affected. Great care muſt be taken that he do not catch cold after bathing.

The *chronic* rheumatiſm is ſeldom attended with any conſiderable degree of fever, and is generally confined to ſome particular part of the body, as the ſhoulders, the back, or the loins. There is ſeldom any inflammation or ſwelling in this caſe. Perſons in the decline of life are moſt ſubject to the chronic rheumatiſm. In ſuch patients it often proves extremely obſtinate, and ſometimes incurable.

In this kind of rheumatiſm the regimen ſhould be

* The beſt and moſt effectual ſudorific in this caſe, is an opiate joined with an antimonial, or with ipecacuanha, as in Dover's powder. If ten or twelve grains of this laſt be given, while the patient is carefully covered up with plenty of blankets, and a baſon of warm drink given occaſionally, it will ſeldom fail to produce a copious ſweat. This ought to be kept up for twelve or fourteen hours at the leaſt.

be nearly the ſame as in the acute. Cool and diluting diet, conſiſting chiefly of vegetable ſubſtances, as ſtewed prunes, coddled apples, currants or gooſeberries boiled in milk, is moſt proper. Arbuthnot ſays, "If there be a ſpecific in aliment for the rheumatiſm, it is certainly whey;" and adds, "That he knew a perſon ſubject to this diſeaſe, who could never be cured by any other method but a diet of whey and bread." He likewiſe ſays, "That cream of tartar in water-gruel, taken for ſeveral days, will eaſe rheumatic pains conſiderably." This I have often experienced, but found it always more efficacious when joined with gum-guaiacum, as directed above. In this caſe the patient may take the doſe mentioned above twice a-day, and likewiſe a tea-ſpoonful of the volatile tincture of gum-guaiacum at bed-time in wine-whey *.

This courſe may be continued for a week, or longer, if the caſe proves obſtinate, and the patient's ſtrength will permit. It ought then to be omitted for a few days, and repeated again. At the ſame time leeches or a bliſtering-plaſter may be applied to the part affected. What I have ge-

 nerally

* The chronic rheumatiſm is certainly a very different diſeaſe from the acute, and therefore requires a very different method of cure. The acute, beſides a general inflammatory diſpoſition, is always attended with more or leſs local inflammation; while the chronic is attended with coldneſs and debility of the part affected, and is without the general inflammatory diſpoſition. The intention in the firſt is to diminiſh the tone of the ſyſtem in general, as well as of the parts affected, by general and topical evacuations, by ſedatives, the antiphlogiſtic regimen, &c.; in the ſecond, the intention is to reſtore the vigour of the ſyſtem in general, and particularly of the parts affected, by tonics and ſtimulants, general as well as local. With this view, the applications to the part, are friction, exerciſe, electricity, the uſe of eſſential oils, &c.; or a combination of ſome oil with the volatile alkali, as in the volatile lineament; while, with a view to the ſyſtem in general, we have recourſe to tonics, as bark and ſtimulants; to large doſes of eſſential oil, or of ſubſtances containing it, as turpentine, guaiac, &c.

nerally found anſwer better than either of theſe, in obſtinate fixed rheumatic pains, is the *warm-plaſter*. It is made by melting, over a gentle fire, an ounce of gum-plaſter with two drams of bliſtering-plaſter. This may be ſpread upon ſoft leather, and applied to the part affected. It ſhould be taken off and wiped every three or four days, and may be renewed once a-fortnight. Cupping upon the part affected is likewiſe often very beneficial, and is greatly preferable to the application of leeches.

Though this diſeaſe may not ſeem in the leaſt to yield to medicines for a long time, yet they ought ſtill to be perſiſted in. Perſons who are ſubject to frequent returns of the rheumatiſm, will often find their account in uſing medicines, whether they be immediately affected with it or not. The chronic rheumatiſm is ſimilar to the gout in this reſpect, that the moſt proper time for uſing medicines to extirpate it, is when the patient is moſt free from it.

To thoſe who can afford to go thither, we would recommend the warm baths of Buxton or Matlock in Derbyſhire. Theſe have often cured very obſtinate rheumatiſms, and are always ſafe either in or out of the fit. When the rheumatiſm is complicated with ſcorbutic complaints, which is not ſeldom the caſe, the Harrowgate waters and thoſe of Moffat are proper. They ſhould both be drank, and uſed as a warm bath.

There are ſeveral of our own domeſtic plants which may be uſed with advantage in the rheumatiſm. One of the beſt of them is the white *muſtard-ſeed*. A table-ſpoonful of this may be taken twice or thrice a-day, in a glaſs of water or ſmall wine. The water-trefoil is likewiſe of great uſe in this complaint. It may be infuſed in wine or ale, or drank in form of tea. The ground-ivy, camomile

camomile, and ſeveral other bitters, are alſo beneficial, and may be uſed in the ſame manner. No benefit, however, is to be expected from theſe, unleſs they be uſed for a conſiderable time. Excellent medicines are often deſpiſed in this caſe, becauſe they do not perform a cure inſtantaneouſly; whereas nothing would be more certain than their effect, were they duly perſiſted in. The want of perſeverance in the uſe of medicines is one great cauſe why chronic diſeaſes are ſo ſeldom cured.

Cold bathing, eſpecially in ſalt water, often cures the rheumatiſm. We would alſo recommend riding on horſeback, and wearing flannel next the ſkin. A flannel-ſhirt, in an obſtinate rheumatiſm, eſpecially if the patient be old, is one of the beſt medicines we know. Iſſues are likewiſe very proper; they have often been known to cure a chronic rheumatiſm. If the pain affects the ſhoulders, an iſſue may be made in the arm; but if it affects the loins, it ſhould be put in the leg or thigh. Rheumatic perſons ought to make choice of a dry warm air, to avoid wet clothes as much as poſſible, and make frequent uſe of the fleſh-bruſh.

OF THE SCURVY.

This diſeaſe prevails chiefly in cold northern countries, eſpecially in low damp ſituations, near large marſhes, or great quantities of ſtagnating water. Sedentary people, of a dull melancholy diſpoſition, are moſt ſubject to it. It often proves

fatal to ſailors in long voyages, particularly in ſhips that are not properly ventilated, and have many people on board.

CAUSES.——The ſcurvy is occaſioned by cold moiſt air; by the long uſe of ſalted or ſmoke-dried proviſions, or of any kind of food that is hard of digeſtion, and affords little nouriſhment. It may alſo proceed from exceſſive evacuations, or the ſuppreſſion of cuſtomary diſcharges; as the *menſes*, hæmorrhoidal flux, &c. It is ſometimes owing to a hereditary taint, in which caſe a very ſmall cauſe will excite the latent diſorder. Grief, fear, and other depreſſing paſſions, have a great tendency to produce this diſeaſe. It may likewiſe proceed from neglect of cleanlineſs, bad clothing, the want of proper exerciſe, confined air, exceſs in eating or drinking, or from any diſeaſe which greatly weakens the body or vitiates the humours.

SYMPTOMS.——This diſeaſe may be known by unuſual wearineſs, heavineſs of the body, and difficulty of breathing, eſpecially after bodily motion, rottenneſs of the gums, which are apt to bleed on the ſlighteſt touch, a ſtinking breath, frequent bleeding of the noſe, difficulty of walking, ſometimes a ſwelling and ſometimes a falling away of the legs, on which there are livid yellow or violet coloured ſpots; the face is generally of a pale or leaden colour. As the diſeaſe advances, other ſymptoms come on; as rottenneſs of the teeth, hæmorrhages, or diſcharges of blood from various parts of the body, foul obſtinate ulcers, which no applications will cure; the patient complains of pains in various parts of the body, eſpecially about the breaſt, and his body is covered with dry ſcaly eruptions. At laſt a waſting or hectic fever comes on, and the miſerable patient is often carried off by a dyſentery, a diarrhœa, a dropſy, the palſy, fainting-

fainting-fits, or a mortification of ſome of the bowels.

CURE.——We know no method of curing this diſeaſe, but by purſuing a courſe directly oppoſite to that which brought it on. It proceeds from a vitiated ſtate of the humours, occaſioned by errors in diet, air, or exerciſe; and this can be removed no other way than by a proper attention to theſe important articles.

If the patient has been obliged to breathe a cold, damp, or confined air, he ſhould be removed, as ſoon as poſſible, to a dry, open, and moderately warm one. If the diſeaſe proceeds from a ſedentary life, or depreſſing paſſions, as grief, fear, &c. the patient muſt take daily as much exerciſe in the open air as he can bear, and his mind ſhould be diverted by chearful company and other amuſements. Nothing has a greater tendency either to prevent or remove this diſeaſe, than conſtant chearfulneſs and good humour. But this, alas! is ſeldom the lot of perſons afflicted with the ſcurvy; they are generally ſurly, peeviſh, ſour, moroſe, and dull.

When the ſcurvy has been brought on by a long uſe of ſalted proviſions, the proper medicine is a diet conſiſting chiefly of freſh vegetables; as oranges, lemons, apples, tamarinds, water-creſſes, ſcurvy-graſs, brook-lime, &c. The uſe of theſe, with milk, pot-herbs, new bread, and freſh beer or cyder, will ſeldom fail to remove a ſcurvy of this kind, if taken before it be too far advanced; but to have this effect, they muſt be perſiſted in for a conſiderable time. When freſh vegetables cannot be had, pickled or preſerved ones may be uſed; and if theſe cannot be obtained, the chymical acids may be taken in their ſtead. All the patient's food and drink muſt be ſharpened with

cream of tartar, elixir of vitriol, vinegar, or the ſpirit of ſea-ſalt, &c.

Theſe things, however, will more certainly prevent than cure the ſcurvy; for which reaſon, ſea-faring people, eſpecially on long voyages, ought to lay in plenty of them. Cabbage, onions, gooſeberries, and many other vegetables, may be kept a long time by *pickling*, *preſerving*, &c. When theſe fail, the chymical acids, mentioned above, which will keep for any length of time, may be uſed. We have reaſon to believe, if ſhips were well ventilated, good ſtore of fruits, greens, and portable ſoup, &c. laid in, and a proper regard paid to cleanlineſs and warmth, that ſailors would be the moſt healthy people in the world, and would ſeldom ſuffer either from the ſcurvy or putrid fevers, which are ſo fatal to that uſeful ſet of men; but it is too much the temper of ſuch people, to deſpiſe all precaution; they will not think of any calamity, till they find it, when it is too late to ward off the blow.

It muſt indeed be owned, that many of them have it not in their power to make the proviſion we are ſpeaking off; but in this caſe, it is the buſineſs of their employers to make it for them; and no man ought to engage in a long voyage, without having this article ſecured.

I have often ſeen very extraordinary effects in the ſcurvy, from a milk-diet. This preparation of nature, is a mixture of animal and vegetable properties, which of all others is the moſt fit for reſtoring a decayed conſtitution, and removing that particular acrimony of the humours, which ſeems to conſtitute the very eſſence of the ſcurvy, and many other diſeaſes. But men deſpiſe this wholeſome and nouriſhing food, becauſe it is cheap, and guzzle down fleſh, and fermented liquors, while milk is only deemed fit for their hogs.

The

The moſt proper drink in the ſcurvy, is whey, or butter-milk. When theſe cannot be had, ſound cyder or perry may be uſed. Wort has been found to be a proper drink in the ſcurvy, and may be uſed at ſea, as malt will keep during the longeſt voyage. A decoction of the tops of the ſpruce-fir is alſo good. It may be drank in the quantity of an Engliſh pint, twice a-day. Tar-water may likewiſe be uſed for this purpoſe, or decoctions of any of the mild mucilaginous vegetables; as ſarſaparilla, marſh-mallow roots, &c. Infuſions of the bitter plants, as ground-ivy, the leſſer centaury, marſh-trefoil, &c. are likewiſe beneficial. I have ſeen the peaſants in ſome parts of Britain expreſs the juice of the laſt-mentioned plant, and drink it with good effects in thoſe foul ſcorbutic eruptions with which they are often troubled in the ſpring-ſeaſon.

The Harrowgate water is certainly an excellent medicine in the ſcurvy. I have often ſeen patients in the moſt deplorable condition, from that diſeaſe, greatly relieved by drinking the ſulphur-water, and bathing in it. The chalybeate-water may alſo be uſed with advantage, eſpecially with a view to brace the ſtomach, after drinking the ſulphur-water, which, though it ſharpens the appetite, never fails to weaken the powers of digeſtion.

A ſlight degree of ſcurvy may be carried off, by frequently ſucking a little of the juice of a bitter orange, or lemon. When the diſeaſe affects the gums only, this practice, if continued for ſome time, will generally carry it off. We would, however, recommend the bitter orange, as greatly preferable to lemon. It ſeems to be as good an acid, and is not near ſo hurtful to the ſtomach. Perhaps our own ſorrel may be little inferior to either of them. All kinds of ſalad are good in the ſcurvy, and ought to be eat in great plenty, as ſpinage, lettice, parſley,

parſley, celery, endive, radiſh, dandelion, &c. It is amazing to ſee how ſoon freſh vegetables in the ſpring cure the brute animals of any ſcab or foulneſs which is upon their ſkins. Is it not natural to ſuppoſe, that their effects ſhould be as great upon the human ſpecies?

The LEPROSY, which was ſo common in this country long ago, ſeems to have been near akin to the ſcurvy. Perhaps, its appearing ſo ſeldom now may be owing to the inhabitants of Britain eating more vegetable food than formerly, living more upon tea and other diluting diet, uſing far leſs ſalted meat, and being greatly more cleanly, and better clothed, &c.—Where this diſeaſe happens, we would recommend the ſame courſe of diet and medicine as in the ſcurvy.

OF THE SCROPHULA, OR KING'S EVIL.

THIS diſeaſe chiefly affects the glands, eſpecially thoſe of the neck. Children, and young perſons of a ſedentary life, are moſt ſubject to it. It is one of thoſe diſeaſes that may be removed by proper regimen, but ſeldom yields to medicine. The inhabitants of cold, damp, marſhy countries, are moſt liable to the ſcrophula.

CAUSES.——This diſeaſe may proceed from a hereditary taint, infection, a ſcrophulous nurſe, &c. Children who have the misfortune to be born of ſickly parents, whoſe conſtitutions have been worn out

out by the French-pox, or other chronic diſeaſes, are apt to be affected with the ſcrophula. It may likewiſe proceed from ſuch diſeaſes as weaken the habit, or vitiate the humours; as the ſmall-pox, meaſles, &c. External injuries, as blows, bruiſes, compreſſions, &c. ſometimes produce ſcrophulous ulcers; but there is reaſon to believe, when this happens, that it is owing either to a prediſpoſition in the habit to this diſeaſe, or to the confinement of the patient. In ſhort, whatever tends to vitiate the humours, or relax the ſolids, prediſpoſes to this diſeaſe, as the want of exerciſe, too much heat or cold, confined air, unwholeſome food, bad water, the long uſe of poor, weak, watery aliments, the neglect of cleanlineſs, or ſuffering children to continue long wet, &c.

SYMPTOMS.——At firſt, ſmall knots appear under the chin, or behind the ears, which gradually increaſe in number and ſize, till they form one large hard tumour. This often continues for a long time, without breaking; and when it does break, it only diſcharges a thin *ſanies*, or watery humour. Other parts of the body are likewiſe liable to its attack, as the arm-pits, groins, feet, hands, eyes, breaſts, &c. Nor are the internal parts exempt from it. It often affects the lungs, liver, or ſpleen; and I have frequently ſeen the glands of the meſentery greatly enlarged by it.

Thoſe obſtinate ulcers which break out upon the feet and hands with ſwelling, and little or no redneſs, are of the ſcrophulous kind. They ſeldom diſcharge good matter, and are exceedingly difficult to cure. The *white ſwellings* of the joints ſeem likewiſe to be of this kind. They can ſeldom be brought to a ſuppuration, and when opened they only diſcharge a thin ichor. There is not a more general ſymptom of the ſcrophula, than a ſwelling of the upper lip and noſe. It likewiſe frequently

frequently begins in a ſingle toe or finger, which continues long ſwelled, with no great degree of pain, till at length the bone becomes carious.

REGIMEN.——As this diſeaſe proceeds, in a great meaſure, from relaxation, the diet ought to be generous and nouriſhing, but at the ſame time light and of eaſy digeſtion; as good light bread, the fleſh and broth of young animals, with now and then a glaſs of generous wine, or good ale. The air ought to be open, dry, and not too cold, and the patient ſhould take as much exerciſe as he can bear. Exerciſe is here of the utmoſt importance. Children will ſeldom be troubled with the ſcrophula, who have enough of exerciſe; and if they be, it alone has the greateſt chance to cure them.

MEDICINE.——The vulgar are remarkably credulous with regard to the cure of the ſcrophula, many of them believing in the virtue of the royal touch, that of the ſeventh ſon, &c. The truth is, we know but little either of the nature or cure of this diſeaſe; and where reaſon or medicines fail, ſuperſtition always comes in their place. Hence it is, that in diſeaſes which are the moſt difficult to underſtand, we always hear of the greateſt number of miraculous cures being performed. Here, however, the deception is eaſily accounted for. The ſcrophula, at a certain period of life, often cures of itſelf; and, if the patient happen to be touched about this time, the cure is imputed to the touch, and not to nature, who is really the phyſician. In the ſame way, the inſignificant noſtrums of quacks and old women, often gain applauſe when they deſerve none.

There is nothing more pernicious than the cuſtom of doſing children with ſtrong purgative medicines in the ſcrophula. People imagine that it proceeds from humours, which muſt be purged off, without

without conſidering, that theſe purgatives increaſe the relaxation, and aggravate the diſeaſe. It has indeed been found, that keeping the belly gently open, eſpecially with ſea-water, has a good effect; but this ſhould only be given in ſuch quantity, as to procure one, or at moſt two ſtools every day. Bathing in the ſalt-water has likewiſe a very good effect, eſpecially in the warm ſeaſon. I have often known a courſe of bathing in ſalt-water, and drinking it in ſuch quantities as to keep the belly gently open, cure a ſcrophula, after many medicines had been tried in vain. When ſalt-water cannot be had, the patient may be bathed in freſh-water, and his belly kept open by ſmall quantities of ſalt and water, or ſome other mild purgative.

Next to cold bathing and drinking the ſalt-water, we would recommend the Jeſuits bark. The cold bath may be uſed in ſummer, and the bark in winter. It may either be taken in ſubſtance, mixed with wine, or if the patient cannot be brought to uſe it in that form, a decoction of it may be drank. An ounce of the Jeſuits bark, and a dram of Winter's bark, groſsly powdered, may be boiled in an Engliſh quart of water to a pint; towards the end, half an ounce of ſliced liquorice-root, and a handful of raiſins, may be added, which will both render the medicine leſs diſagreeable, and make it take up more of the bark. The liquor muſt be ſtrained, and two, three, or four ſpoonfuls, according to the age of the patient, taken three times a-day. The patient ought at the ſame time to take, twice or thrice a-day, a glaſs of good wine, with ten, twenty, or thirty drops of volatile tincture of guaiacum in it. I have often given the bark in obſtinate ſcrophulous caſes, with very good effect. An adult may take at leaſt two drams of it daily, and muſt continue to uſe it for ſeveral months.

The

The Moffat and Harrowgate waters are likewiſe very proper medicines in the ſcrophula, eſpecially the latter. They ought not, however, to be drank in large quantities, but ſhould be taken ſo as to keep the belly gently open, and muſt be uſed for a conſiderable time.

As to external applications, they are of little avail. Before the tumour breaks, nothing ought to be applied to it, unleſs a piece of flannel, or ſomething to keep it warm. After it breaks, the ſore may be dreſſed with ſome digeſtive ointment. What I have always found to anſwer beſt, was the yellow baſilicon, mixed with about a ſixth or eight part of its weight of red precipitate. The ſore may be dreſſed with this twice a-day; and if it be very fungous, and does not digeſt well, a larger proportion of the precipitate may be added.

Medicines which mitigate this diſeaſe, though they do not cure it, are not to be deſpiſed. If the patient can be kept alive, by any means, till he arrives at the age of puberty, he has a great chance to get well; but if he does not recover at this time, in all probability he never will. Perſons afflicted with this diſeaſe, ought not to marry. There is no malady which parents are ſo apt to communicate to their offſpring, as the ſcrophula; and ſurely it is a cruel thing to entail miſery on poſterity.

For the means of preventing this diſeaſe, we muſt refer the reader to the obſervations on nurſing, at the beginning of the book.

OF

OF THE RICKETS.

This diſeaſe generally attacks children betwixt the age of nine months and two years. It appeared firſt in England, about the time when manufactures began to be introduced, and ſtill prevails moſt in towns where the inhabitants follow ſedentary employments, and by that means neglect either to take proper exerciſe themſelves, or to give it to their children. It has a great reſemblance to the foregoing diſeaſe, both in its cauſes, and method of cure.

CAUSES.——One cauſe of the rickets in children, is diſeaſed parents. Mothers of a weak relaxed habit, who neglect exerciſe, and live upon weak watery diet, can neither be expected to bring forth ſtrong and healthy children, or to be able to nurſe them after they are brought forth. Accordingly we find, that the children of ſuch women generally die of the rickets, the ſcrophula, conſumptions, &c. Children begotten by men in the decline of life, who are afflicted with the gout, the gravel, or other chronic diſeaſes, or who have been often affected with the venereal diſeaſe in their youth, are likewiſe very liable to the rickets.

Any diſorder that weakens the conſtitution, or relaxes the habit of children, as the ſmall-pox, meaſles, teething, the hooping-cough, &c. predispoſes them to this diſeaſe. It may likewiſe be occaſioned by improper diet, as food that is either too weak and watery, or ſo viſcid that the ſtomach cannot digeſt it. Too great a quantity of rich and nouriſhing

nouriſhing diet may likewiſe vitiate the humours, and occaſion the rickets. Bad nurſing is often the cauſe of this diſeaſe. When the nurſe is either diſeaſed, or has not enough of milk to nouriſh the child, it muſt ſuffer. But children ſuffer oftener by want of care in nurſes, than want of food. Allowing an infant to continue long wet, or not keeping it thoroughly clean in its clothes, &c. has the moſt pernicious effects. Wet ſhoes, ſtockings, and other clothes, relax the bodies of children, and greatly obſtruct their growth. The want of free air is likewiſe very hurtful to children in this reſpect. A nurſe who lives in a cloſe, ſmall houſe, where the air is damp and confined, and who is too indolent to carry her child abroad into the open air, will hardly fail to give it the rickets. But want of exerciſe is the chief cauſe of this diſeaſe. A healthy child ſhould always be in motion, unleſs when aſleep; but if it be ſuffered to lie, or ſit, inſtead of being toſſed and dandled about, it can hardly eſcape this baneful malady.

SYMPTOMS.——At the beginning of this diſeaſe, the child's fleſh grows ſoft and flabby; its ſtrength is diminiſhed, it loſes its wonted chearfulneſs, looks more grave and compoſed than is natural for its age, and does not care to be moved. The head and belly become too large in proportion to the other parts; the face appears full, and the complexion florid. Afterwards, the bones begin to be affected, eſpecially in the more ſoft and ſpungy parts, or towards the ends. Hence the wriſts and ancles become thicker than uſual; the ſpine, or back-bone, puts on an unnatural ſhape; the breaſt is likewiſe often deformed, and the bones of the arms and legs grow crooked. All thoſe ſymptoms vary according to the violence of the diſeaſe. The pulſe is generally quick, but feeble; the appetite and digeſtion, for the moſt part,

part, bad; the teeth come ſlowly, and with difficulty, and they often rot and fall out afterwards. Rickety children generally have great acuteneſs of mind, and an underſtanding above their years. Whether this be owing to their being more in the company of adults than other children, or the enlargement of the brain, we ſhall not pretend to determine.

REGIMEN.——As this diſeaſe is always attended with evident ſigns of weakneſs and relaxation, our chief aim in the cure muſt be, to brace and ſtrengthen the ſolids, and to promote digeſtion and the due preparation of the fluids. Theſe important ends will be beſt promoted by wholeſome nouriſhing diet, ſuited to the age and ſtrength of the patient, and often repeated; by open dry air, and plenty of exerciſe. If the child has a bad nurſe, who either neglects her duty, or has not enough of milk, ſhe ſhould be changed. If the ſeaſon be cold, the child ought to be kept warm; and when the weather is hot, it ought to be kept cool; as ſweating is very apt to weaken it; and too great a degree of cold has the ſame effect. The limbs ſhould be rubbed frequently with a warm hand, and the child ſhould be kept as chearful as poſſible.

The diet ought to be light and dry, as good bread, roaſted fleſh, &c. Biſcuit is generally reckoned the beſt bread; and pigeons, pullets, veal, rabbits, or mutton roaſted or minced, are the moſt proper fleſh. If the child be too young for fleſh-meats, he may have rice, millet, or pearl-barley boiled with raiſins, to which may be added a little wine and ſpice. His drink may be good claret*, of which he may take half a glaſs three or four times a-day. Thoſe who cannot afford claret, may give

* Good port would in our opinion be preferable in ſuch a caſe.

the child now and then a wine glaſs of fine mild ale or porter.

MEDICINE.——Medicines are here of little avail. The diſeaſe may often be cured by the nurſe, but ſeldom by the phyſician. In children of a groſs habit, gentle purges or vomits may ſometimes be of uſe; but they will never carry off the malady. That muſt depend upon bracing alone: For which purpoſe, beſides the regimen mentioned above, we would recommend the cold bath, eſpecially in the warm ſeaſon. It muſt, however, be adminiſtered with prudence, as ſome rickety children cannot bear it. The beſt time for uſing the cold bath is in the morning, and the child ſhould be well rubbed with a dry cloth, immediately after. If the child ſhould be weakened by the uſe of the cold bath, it muſt be diſcontinued.

Sometimes iſſues have been found beneficial, both in this and the foregoing diſeaſe. They are peculiarly neceſſary for children who abound with groſs humours. An infuſion of the Jeſuits bark, in wine or ale, is likewiſe of uſe; but it is ſcarce poſſible to bring children to take it. We might here mention many other medicines which have been recommended for the rickets; but, as there is far more danger in truſting to theſe, than in neglecting them altogether, we chuſe rather to paſs them over, and to depend entirely on regimen.

OF

OF THE ITCH.

THE ITCH is a diſeaſe of the ſkin, and is generally communicated by infection. It ſeems originally to proceed from the want of cleanlineſs, bad air, or unwholeſome diet; as the inmates of jails, hoſpitals, and ſuch as live upon ſalted and ſmoked dried proviſions, are moſt ſubject to it.

It generally appears in form of ſmall watery puſtules, firſt about the wriſts, or betwixt the fingers, and afterwards it affects the arms, legs, and thighs, &c. Theſe puſtules are attended with an intolerable itching, eſpecially when the patient is warm in bed, or ſits near the fire. Sometimes the ſkin is covered with large blotches or ſcabs, and at other times with a white ſcurf, or ſcaly eruption. This laſt is called the Dry Itch, and is the moſt difficult to cure.

The itch is ſeldom a dangerous diſeaſe, unleſs when it is rendered ſo by neglect or improper treatment. If it be ſuffered to continue too long, it may vitiate the whole maſs of humours; and, if it be ſuddenly drove in, without proper evacuations, it may occaſion fevers, inflammations of the viſcera, or other internal diſorders.

The ſafeſt medicine for the itch is ſulphur, which ought to be applied both externally and internally. The parts moſt affected may be rubbed with an ointment made of common ſulphur and flowers of brimſtone, each an ounce; crude ſal-ammoniac, finely powdered, two drams; hog's

lard, or butter, four ounces. A ſcruple, or half a dram, of the eſſence of lemon, may be added, to take away the diſagreeable ſmell. About the bulk of a nutmeg of this may be rubbed upon the extremities, at bed-time, twice or thrice a-week. It is ſeldom neceſſary to rub any part but the extremities; and even theſe ought not to be all rubbed at the ſame time, but by turns, as it is dangerous to ſtop too many pores at once.

Before the patient begins to uſe the ointment, he ought, if he be of a full habit, to bleed, and take a purge or two. It will likewiſe be proper, during the uſe of it, to take every night and morning, as much of the flower of brimſtone, in a little treacle or new milk, as will lie upon a ſhilling. He ſhould beware of catching cold, ſhould wear more clothes than uſual, and take every thing warm. The ſame clothes, the linen excepted, ought to be kept on all the time of uſing the ointment; and ſuch clothes as have been worn while the patient was under the diſeaſe, are not to be uſed again, unleſs they have been fumigated with brimſtone, and thoroughly cleaned, otherwiſe they will communicate the infection anew.

I never knew brimſtone, if uſed as directed above, fail to cure the itch; and I have reaſon to believe, that, if duly perſiſted in, it never will fail; but if it be only uſed once or twice, and cleanlineſs be neglected, it is no wonder if the diſorder returns. The great ſecret both for preventing and curing the itch, is CLEANLINESS. Where it prevails, the itch will ſeldom approach; and if it ſhould, it will ſoon be baniſhed. The quantity of ointment mentioned above, will generally be ſufficient for the cure of one perſon; but, if any ſymptoms of the diſeaſe ſhould appear again, the medicine may be repeated. It is both more ſafe and efficacious, when perſiſted in for a conſiderable time,

time, than when a large quantity is applied at once. It will likewiſe be proper, that the patient, while he is uſing the ointment, ſhould take a purge once a-week.

People ought to be extremely cautious, not to miſtake other eruptions for the itch; as the ſtoppage of theſe may be attended with fatal conſequences. Many of the eruptive diſeaſes to which children are liable, have a near reſemblance to the itch; and I have often known infants killed by being rubbed with greaſy ointments, that made theſe eruptions ſtrike ſuddenly in, which nature had thrown out to preſerve the patient's life, or prevent ſome other diſeaſe.

Much miſchief is likewiſe done by the uſe of mercury in this diſeaſe. I have known ſome perſons mad enough to waſh the parts affected with a ſtrong ſolution of the corroſive ſublimate, which had almoſt proved fatal. Others uſe the mercurial ointment, without taking the leaſt care either to avoid cold, or obſerve a proper regimen. The conſequences of ſuch conduct may be eaſily gueſſed. I have known even the mercurial girdles produce tragical effects, and would adviſe every perſon, as he values his health, to beware how he uſes them. Mercury ought never to be uſed as a medicine, without the greateſt care. Ignorant people look upon theſe girdles as a kind of charm, without conſidering that the mercury enters the blood.

As ſulphur is both the moſt ſafe and efficacious medicine for the itch, we ſhall not recommend any other. Other medicines may be uſed by perſons of ſkill, but are not to be ventured upon by the ignorant. Thoſe who would avoid this deteſtable diſeaſe, ought to beware of infected perſons, to uſe wholeſome food, and to ſtudy univerſal cleanlineſs.

OF THE ASTHMA.

THE aſthma is a diſeaſe of the lungs, which ſeldom admits of a cure. Perſons in the decline of life, are moſt liable to this diſeaſe. It is divided into the moiſt and dry, or humoural and nervous. The former is attended with expectoration or ſpitting; but in the latter, the patient ſeldom ſpits, unleſs ſometimes a little tough phlegm, by the mere force of coughing.

CAUSES.——The aſthma is ſometimes hereditary. It may likewiſe proceed from a bad formation of the breaſt; the fumes of metals or minerals taken into the lungs *; violent exerciſe, eſpecially running; the obſtruction of cuſtomary evacuations, as the menſes, hæmorrhoids, &c.; the ſudden retroceſſion of the gout, or ſtriking in of eruptions, as the ſmall-pox, meaſles, &c. violent paſſions of the mind, as ſudden fear or ſurpriſe. In a word, the diſeaſe may proceed from any cauſe that either impedes the circulation of the blood through the lungs, or prevents their being duly expanded by the air.

SYMPTOMS.——An aſthma is known by a quick laborious reſpiration, which is generally perfórmed with a kind of wheezing noiſe. Sometimes the

* I knew a perſon whoſe lungs were ſet in a manner ſtock-ſtill, by the fumes of antimony. It happened in the night, after he had been preparing a great quantity of the regulus of antimony through the day. He was relieved by clyſters, fomentations, and oily emulſions.

the difficulty of breathing is ſo great, that the patient is obliged to keep an erect poſture, otherwiſe he is in danger of being ſuffocated. A fit or paroxyſm of the aſthma, is very apt to happen after a perſon has been expoſed to cold eaſterly winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, or the like.

A fit of the aſthma is generally uſhered in with great liſtleſſneſs, want of ſleep, hoarſeneſs, cough, belching of wind, a ſenſe of heavineſs about the breaſt, and difficulty of breathing. To theſe ſucceed heat, fever, pain of the head, ſickneſs, and nauſea, great oppreſſion of the breaſt, palpitation of the heart, a weak, and ſometimes intermitting pulſe, an involuntary flow of tears, bilious vomitings, &c. All the ſymptoms grow worſe towards night; the patient is eaſier when up than in bed, and is very deſirous of cool air.

REGIMEN.——The food ought to be light, and of eaſy digeſtion. Boiled meats are generally preferred to roaſted, and the fleſh of young animals to that of old. All windy food, and whatever is apt to ſwell upon the ſtomach, is to be avoided. Light puddings, white broths, and ripe fruits baked, boiled, or roaſted, are proper. Strong liquor of all kinds, eſpecially malt-liquor, is hurtful. The patient ſhould eat a very light ſupper, or rather none at all. His clothing ſhould be warm, eſpecially in the winter-ſeaſon. A flannel-ſhirt or waiſtcoat, and thick ſhoes, are of great ſervice, as all diſorders of the breaſt are much relieved by keeping the feet warm, and promoting the perſpiration.

But nothing is of ſo great importance in the aſthma, as pure and moderately warm air. Aſthmatic people can ſeldom bear either the cloſe heavy air of a large town, or the ſharp, keen atmoſphere of a bleak hilly country; a medium be-

tween theſe, is therefore to be choſen. The air near a large town is often better than at a diſtance, provided the patient be removed ſo far as not to be affected by the ſmoke. Some aſthmatic patients indeed breathe eaſier in town than in the country; but this is ſeldom the caſe, eſpecially in towns where much coal is burnt. Aſthmatic perſons who are obliged to be in town all day, ought at leaſt to ſleep out of it. Even this will often prove of great ſervice. Thoſe who can afford it, ought to travel into a warmer climate. Many aſthmatic perſons who cannot live in Britain, enjoy very good health in the ſouth of France, or in Spain, or Italy.

Exerciſe is likewiſe of very great importance in the aſthma, as it promotes the digeſtion, and greatly aſſiſts in the preparation of the blood. The blood of aſthmatic perſons is ſeldom duly prepared, owing to the proper action of the lungs being impeded. For this reaſon, ſuch people ought daily to take as much exerciſe, either on foot, horſeback, or in a machine, as they can bear.

MEDICINE.——Almoſt all that can be done by medicine in this diſeaſe, is to relieve the patient, when ſeized with a violent fit. This indeed requires the greateſt expedition, as the diſeaſe often proves ſuddenly fatal. In the paroxyſm or fit, the body is generally bound, a clyſter ought therefore to be adminiſtered; and if there be occaſion, it may be repeated two or three times. The patient's feet ought to be put into warm water, and afterwards rubbed with a warm hand, or dry cloth. If there be a violent ſpaſm about the breaſt or ſtomach, warm fomentations, or bladders filled with warm milk and water, may be applied to the part affected, and warm cataplaſms to the ſoles of the feet. The patient muſt drink freely of diluting liquors, and may take a tea-ſpoonful of the tinc-

ture

ture of caſtor and ſaffron, mixed together, in a cup of valerian-tea, twice or thrice a-day. Sometimes a vomit has a very good effect, and ſnatches the patient, as it were, from the jaws of death. This will be more ſafe after other evacuations have been premiſed *.

Out of the fit. In the moiſt aſthma, ſuch things as promote expectoration or ſpitting, ought to be uſed; as the ſyrup of ſquills, gum-ammoniac, and ſuch like. A common ſpoonful of the ſyrup or oxymel of ſquills, mixed with an equal quantity of cinnamon-water, may be taken three or four times a-day. Any quantity of gum-ammoniac, with an equal quantity of aſafœtida, may be made into pills, and four or five of them taken every night at bed-time †.

In the convulſive or nervous aſthma, antiſpaſmodics and bracers are the moſt proper medicines. The patient may take a tea-ſpoonful of the paregoric elixir, twice a day. The Jeſuits bark is likewiſe proper in this caſe. It may be taken in ſubſtance, or infuſed in wine. In ſhort, every thing that braces the nerves, or takes off ſpaſm, may be of uſe in a nervous aſthma. It is often relieved by the uſe of aſſes milk; I have likewiſe known cow's milk drank warm of a morning, have a very good effect in this caſe.

In every ſpecies of aſthma, iſſues have a good effect; they may either be made in the back or ſide, and ſhould never be allowed to dry up. We ſhall here, once for all, obſerve, that in moſt chronic

* Eſpecially blood-letting, which, in the firſt attacks of this diſeaſe when violent, ought not to be omitted.

† After the violence of the attack has been moderated by evacuations, as bleeding, purging, &c. opiates will be found of great ſervice in this diſeaſe.

nic diſeaſes, iſſues are extremely proper. They are both a ſafe and efficacious remedy; and though they do not always cure the diſeaſe, yet they will often prolong the patient's life.

OF THE APOPLEXY.

THE apoplexy is a ſudden loſs of ſenſe and motion, wherein the patient is to all appearance dead, only the heart and lungs ſtill continue to move. This diſeaſe, by a little care, might often be prevented, but can ſeldom be cured. It chiefly attacks ſedentary perſons of a groſs habit, who uſe a rich and plentiful diet, and indulge in ſtrong liquors. People in the decline of life are moſt ſubject to the apoplexy. It prevails moſt in winter, eſpecially in long rainy ſeaſons, and very low ſtates of the barometer.

CAUSES.——The immediate cauſe of an apoplexy is a compreſſion of the brain, occaſioned by an effuſion of blood, or of watery humours on that part. The former is called a *ſanguine*, and the latter a *ſerous apoplexy*. It may be produced by any cauſe that increaſes the circulation towards the the brain, or prevents the return of the blood from the head; as intenſe ſtudy, violent paſſions *, viewing objects for a long time obliquely, wearing any thing too tight about the neck, a rich

* I knew a woman who in a violent fit of anger was ſeized with a ſanguine apoplexy. She at firſt complained of extreme pain, *as if daggers*

rich and luxurious diet, ſuppreſſion of urine, ſuffering the body to cool ſuddenly after having been very hot, continuing long in a warm-bath; the exceſſive uſe of ſpiceries, or high-ſeaſoned food; exceſs of venery, the ſudden ſtriking in of any eruption, ſuffering iſſues, ſetons, &c. ſuddenly to dry up, or the ſtoppage of any cuſtomary evacuation, a mercurial ſalivation ſuddenly checked by cold, wounds, or bruiſes on the head, long expoſure to exceſſive cold, poiſonous exhalations, &c.

SYMPTOMS, and method of cure.——The uſual forerunners of an apoplexy are giddineſs, pain, ſwimming of the head, loſs of memory, drowſineſs, noiſe in the ears, the night-mare, a ſpontaneous flux of tears, and laborious reſpiration. When perſons of an apoplectic make obſerve theſe ſymptoms, they have reaſon to fear the approach of a fit, and ſhould endeavour to prevent it by plentiful bleeding, low diet, and opening medicines.

In the ſanguine apoplexy, if the patient does not die ſuddenly, the countenance appears florid, the face is ſwelled or puffed up, and the blood-veſſels, eſpecially about the neck and temples, are turgid, the pulſe beats ſtrong, the eyes are prominent and fixed, and the breathing is difficult, and performed with a ſnorting noiſe. The excrements and urine are often voided ſpontaneouſly, and the patient is ſometimes ſeized with a vomiting.

In this caſe every method muſt be taken to leſſen the force of the blood towards the head. The patient ſhould be kept perfectly eaſy and cool. His head ſhould be raiſed pretty high, and his feet ſuffered to hang down. His clothes ought to be looſened,

daggers had been thruſt through her head, as ſhe expreſſed it. Afterwards ſhe became comatoſe and dull, her pulſe ſunk very low, and was exceeding ſlow. By the help of bleeding, bliſtering, and other evacuations, ſhe was kept alive for about a fortnight. When her head was opened, a large quantity of extravaſated blood was found in the left ventricle of the brain.

looſened, eſpecially about the neck, and freſh air admitted into his chamber. His garters ſhould be tied pretty tight, by which means the motion of the blood from the lower extremities will be retarded. As ſoon as the patient is placed in a proper poſture, he ſhould be bled pretty freely in the neck or arm; and, if there be occaſion, the operation may be repeated in two or three hours. A laxative clyſter with plenty of ſweet oil, or freſh butter, and a large ſpoonful of common ſalt in it, may be adminiſtered every two hours, and bliſtering-plaſters applied betwixt the ſhoulders, and to the calves of the legs *.

As ſoon as the ſymptoms are a little abated, and the patient is able to ſwallow, he ought to drink freely of ſome diluting opening liquor; as a decoction of tamarinds and liquorice, cream-tartar whey, or common whey with cream of tartar diſſolved in it: Or he may take any cooling purge, as Glauber's ſalts, or manna diſſolved in an infuſion of ſenna, or the like. All ſpirits and other ſtrong liquors are to avoided. Even volatile ſalts held to the noſe do miſchief. Vomits, for the ſame reaſon, ought not to be given, nor any thing that may increaſe the motion of the blood towards the head.

In the ſerous apoplexy, the ſymptoms are nearly ſimilar, only the pulſe is not ſo ſtrong, the countenance is leſs florid, and the breathing leſs difficult. Bleeding is not ſo neceſſary here, as in the former caſe. It may however generally be performed once with ſafety and advantage; but ſhould not be repeated. The patient ſhould be placed in the ſame

* Theſe will be more effectual if applied to the part affected. Local bleeding, in this caſe, by means of leeches, or by ſcarifying and cupping the part, ought not to be omitted: and if a medical perſon of ſkill be at hand, opening the temporal arteries ſhould be had recourſe to.

ſame poſture as directed above, and ſhould have bliſtering-plaſters applied, and receive opening clyſters in the ſame manner. Purges are here likewiſe neceſſary, and the patient may drink ſtrong balm-tea. If he be inclined to ſweat, it ought to be promoted, by drinking ſmall wine-whey, or an infuſion of carduus benedictus. A plentiful ſweat kept up for a conſiderable time, has often carried off a ſerous apoplexy.

When apoplectic ſymptoms proceed from opium, or other narcotic ſubſtances taken into the ſtomach, vomits are neceſſary. The patient is generally relieved as ſoon as he has diſcharged the poiſon in this way.

Perſons of an apoplectic make, or thoſe who have been attacked by it, ought to uſe a very ſpare and ſlender diet, avoiding all ſtrong liquors, ſpiceries, and high-ſeaſoned food. They ought likewiſe to guard againſt all violent paſſions, and to avoid the extremes of heat and cold. The head ſhould be ſhaved, and daily waſhed with cold water. The feet ought to be kept warm, and never ſuffered to continue long wet. The belly muſt, by all means, be kept open, either by food or medicine, and blood ought to be let every ſpring and fall *. Moderate exerciſe ſhould likewiſe be taken; but it ought never to be continued too long. Nothing has a greater effect in preventing an apoplexy than iſſues or perpetual

* Regular blood-letting at ſtated ſeaſons of the year, is certainly a very troubleſome and even a dangerous habit. When a habit of this kind has been once eſtabliſhed, the operation cannot be omitted without the utmoſt hazard, whilſt its continuation produces more and more the neceſſity of a frequent repetition. Where the ſame end, therefore, can be obtained by a proper regulation of diet and exerciſe, it ought never to be had recourſe to. This, though generally, is not always the caſe; and it is only where this precaution has been neglected or has failed, or when there are ſymptoms of an approaching attack, that we would recommend this operation. In this ſituation it becomes abſolutely neceſſary, in order to avoid a much more immediate danger.

petual bliſters; but great care muſt be taken never to ſuffer them to dry up, without opening others in their ſtead. Apoplectic perſons ought never to go to ſleep with a full ſtomach, nor to lie with their heads too low, or wear any thing tight about their necks.

OF THE PALSY.

The Palſy is a loſs or diminution of ſenſe, or motion, or of both, in one or more parts of the body. It is more or leſs dangerous, according to the importance of the part affected. A palſy of the heart, lungs, or any part neceſſary for life, is mortal. When it affects the ſtomach, the inteſtines, or the bladder, it is highly dangerous. If the face be affected, the caſe is bad, as this ſhews that the diſeaſe proceeds from the brain. If the part affected feels cold, is inſenſible, or waſtes away, there is ſmall hopes of a cure, eſpecially if the judgement and memory begin to fail.

CAUSES.——The immediate cauſe of palſy is whatever prevents the regular exertion of the nervous power upon any particular muſcle or part of the body. The occaſional and pre-diſpoſing cauſes are various; as drunkenneſs, wounds of the brain or ſpinal marrow, preſſure upon the brain or nerves, very cold or damp air, the ſuppreſſion of cuſtomary evacuations, ſudden fear, want of exerciſe, or whatever

ever greatly relaxes the ſyſtem, as drinking much tea *, or coffee, &c. Wounds of the nerves themſelves, or any thing that obſtructs the regular action of that vital power contained in them, will occaſion a palſy. It may likewiſe proceed from the poiſonous fumes of metals or minerals; as mercury, lead, arſenic, &c.

In young perſons of a full habit, where there are ſymptoms of inflammation, the palſy muſt be treated in the ſame manner as the ſanguine apoplexy. The patient muſt be bled, bliſtered, and have his belly opened by ſharp clyſters or purgative medicines. But in old age, or when the diſeaſe proceeds from relaxation or debility, which is generally the caſe, a quite contrary courſe muſt be purſued. The diet muſt be warm and attenuating, conſiſting chiefly of ſpicy and aromatic vegetables; as muſtard, horſe-radiſh, &c. The drink may be generous wine, muſtard-whey, or brandy and water. Friction with the fleſh-bruſh, or a warm hand, is extremely proper, eſpecially on the parts affected. Bliſtering-plaſters may likewiſe be applied to the affected part with advantage. When this cannot be done, they may be rubbed with the volatile liniment, or the nerve-ointment of the Edinburgh Diſpenſatory. But the beſt external application is electricity. The ſhocks ſhould be received on the part affected; and they ought daily to be repeated for ſeveral weeks †.

Vomits

* Many people imagine, that tea has no tendency to hurt the nerves, and that drinking the ſame quantity of warm water would be equally pernicious. This however ſeems to be a miſtake. I know many perſons who daily drink three or four cups of warm milk and water without feeling any bad conſequences; yet the ſame quantity of tea will make their hands ſhake for twenty-four hours.

† Sparks ſhould rather be drawn from the part, than ſtrong ſhocks ſent through it.

Vomits are very beneficial in this kind of palſy, and ought to be frequently adminiſtered. Cephalic ſnuff, or any thing that makes the patient ſneeze, is likewiſe uſeful. Some pretend to have found great benefit from rubbing the parts affected with nettles; but this does not ſeem to be any ways preferable to bliſtering. If the tongue be affected, the patient may gargle his mouth frequently with brandy and muſtard; or he may hold a bit of ſugar in his mouth, wet with the palſy-drops or compound ſpirits of lavender. The wild valerian root is a very proper medicine in this caſe. It may either be taken in an infuſion with ſage-leaves, or half a dram of it in powder may be given in a glaſs of wine three times a day. If the patient cannot uſe the valerian, he may take of *ſal volatile oleoſum*, compound ſpirits of lavender, and tincture of caſtor, each half an ounce; mix theſe together, and take forty or fifty drops in a glaſs of wine, three or four times a-day. A table-ſpoonful of muſtard-ſeed taken frequently is a very good medicine. The patient ought likewiſe to chew cinnamon-bark, ginger, or other warm ſpiceries.

Exerciſe is of the utmoſt importance in the palſy; but the patient muſt beware of cold, damp, and moiſt air. He ought to wear flannel next his ſkin; and, if poſſible, ſhould remove into a warmer climate.

OF

OF THE EPILEPSY, OR FALLING SICKNESS.

The epilepsy is a sudden deprivation of all the senses, wherein the patient falls suddenly down, and is affected with violent convulsive motions. Children, especially those that are delicately brought up, are most subject to it. It more frequently attacks men than women, and is very difficult to cure. When the epilepsy attacks children, there is reason to hope it may go off about the time of puberty. When it attacks any person after twenty years of age, the cure is difficult; but when after forty, a cure is hardly to be expected. If the fit continues only for a short space, and returns seldom, there is reason to hope; but if it continues long, and returns frequently, the prospect is bad. It is a very unfavourable symptom, when the patient is seized with the fits in his sleep.

CAUSES.——Sometimes the epilepsy is a hereditary disease. It may likewise proceed from a sudden fright of the mother when with child of the patient; from blows, bruises, or wounds on the head; a collection of water, blood, or serous humours in the brain; a polypus; tumours or concretions within the skull; excessive drinking; intense study; excess of venery; worms; teething; suppression of customary evacuations; too great emptiness or repletion; violent passions or affections of the mind, as fear, joy, &c.; hysteric affections; contagion received into the body, as the infection of the small-pox, measles, &c.

SYMPTOMS.——An epilectic fit is generally preceded by unuſual wearineſs; pain of the head; dullneſs; giddineſs; noiſe in the ears; dimneſs of ſight; palpitation of the heart; diſturbed ſleep; difficult breathing; the bowels are inflated with wind; the urine is in great quantity, but thin; the complexion is pale; the extremities are cold; and the patient feels as it were a ſtream of cold air aſcending towards his head.

In the fit, the patient generally makes an unuſual noiſe; his thumbs are drawn in towards the palms of the hands; his eyes are diſtorted; he ſtarts, and foams at the mouth; his extremities are bent or twiſted various ways; he often diſcharges his ſeed, urine, and fœces, unvoluntarily; and is quite deſtitute of all ſenſe and reaſon. After the fit is over, his ſenſes gradually return, and he complains of a kind of ſtupor, wearineſs, and pain of his head; but has no remembrance of what happened to him during the fit.

Sometimes the fits return at ſtated periods, as at the full or change of the moon: at other times they are excited by violent affections of the mind, a debauch of liquor, exceſſive heat, cold, or the like.

This diſeaſe, from the difficulty of inveſtigating its cauſes, and its ſtrange ſymptoms, was formerly attributed to the wrath of the gods, or the agency of evil ſpirits. In modern times, it has often, by the vulgar, been imputed to witchcraft or faſcination. It depends, however, as much upon natural cauſes as any other malady; and its cure can only be effected by perſiſting in the uſe of proper means.

REGIMEN.——Epileptic patients ought, if poſſible, to breathe a pure and free air. Their diet ſhould be nouriſhing, but of eaſy digeſtion. They ought to drink nothing ſtrong, to avoid ſwine's fleſh, water-fowl, and likewiſe all windy and oily vegetables.

tables, as cabbage, nuts, &c. They ought to keep themſelves chearful, carefully avoiding all occaſions of violent paſſions, as anger, fear, &c *.

Exerciſe is likewiſe of great uſe; but the patient muſt be careful to avoid all extremes either of heat or cold, all dangerous ſituations, as ſtanding upon precipices, riding deep waters, &c. Any thing that makes him giddy is apt to occaſion a fit, as turning round, looking into a deep pit, or the like; all theſe ought therefore to be avoided with the utmoſt care.

MEDICINE.——The intentions of cure muſt vary according to the cauſe of the diſeaſe. If the patient be of a ſanguine temperament, and there be reaſon to fear an inflammation in the brain, bleeding and other evacuations will be neceſſary. When the diſeaſe is occaſioned by the ſtoppage of cuſtomary evacuations, theſe, if poſſible, muſt be reſtored; if this cannot be done, others may be ſubſtituted in their place. Iſſues or ſetons, in this caſe, have often a very good effect. When there is reaſon to believe that the diſeaſe proceeds from worms, proper medicines muſt be uſed to kill or carry off theſe vermin. When the diſeaſe proceeds from teething, the belly ſhould be kept open by emollient clyſters, the feet frequently bathed in warm water, and, if the fits prove obſtinate, a bliſtering-plaſter may be put betwixt the ſhoulders. The ſame method is to be followed, when epileptic fits precede the eruption of the ſmall-pox, or meaſles, &c.

When the diſeaſe is hereditary, or proceeds from a wrong formation of the brain, a cure is not to be

* It has already been obſerved, that epileptic fits are often the effect of fear, and are occaſioned by that idle cuſtom among young people of frightening one another. Though this be generally done out of mere frolic, it has many dreadful conſequences, and ought by all means to be diſcouraged. It is ſurely a ſmaller crime to take away a perſon's life, than to render him at once miſerable in himſelf, and a burden to ſociety.

expected. When it is owing to too great a mobility of the nervous ſyſtem, ſuch medicines as tend to brace and ſtrengthen the nerves may be uſed, as the Jeſuits bark, Valerian root, miſletoe of the oak, ſnake-root, &c *.

Fuller recommends the following electuary as a moſt excellent *anti-epileptic*. Take Jeſuits bark in powder three ounces, Virginian ſnake-root powdered one ounce, as much ſyrup of pæony or cloves as is ſufficient to form it into a ſoft electuary. The doſe to an adult is a dram, or about the ſize of a nutmeg, morning and evening. It muſt be continued for three or four months, and afterwards repeated, three or four days before the new and full moon, for ſome time.

Mead recommends an electuary againſt the epilepſy much of the ſame nature, only he uſes Valerian-root in place of the ſnake-root. It muſt be taken in the ſame manner as the above. The patient ought always to be bled, and to take a purge or two, before he begins to uſe theſe medicines. They will likewiſe have a better effect if the patient drinks a tea-cupful of the decoction of *guaiacum* after each doſe. It may be made by boiling two ounces of guaiacum ſhavings, and one ounce of raiſins of the ſun ſtoned, in two Engliſh quarts of water to one. Strain the liquor, and afterwards let it ſtand to ſettle, then pour off the clear from the feces.

Muſk has ſometimes been found to anſwer very well in the epilepſy. Ten or twelve grains of it, with the ſame quantity of factitious cinnabar, may be

* It is the foſſil tonics that are conſidered as affording the moſt powerful remedies in this ſpecies of the diſeaſe; as chalybeates, flowers of zinc, cuprum ammoniacum. Of theſe, the laſt in particular has been frequently uſed with ſucceſs in this diſeaſe. It is given at firſt in the doſe of a quarter or half a grain, according to the age of the patient, to be repeated twice a-day, and increaſed to what the ſtomach will bear without vomiting.

be made up into a bolus, and taken every night and morning.

Sometimes the epilepſy has been cured by electricity.

Convulſion-fits proceed from the ſame cauſes, and muſt be treated in the ſame manner as the epilepſy.

There is one particular ſpecies of convulſions, which commonly goes by the name of St Vitus's dance, wherein the patient is agitated with ſtrange motions and geſticulations, which by the common people are generally believed to be the effects of witchcraft. This diſeaſe may be cured by repeated bleedings and purges * ; and afterwards uſing the medicines preſcribed above for the epilepſy, viz. the Jeſuit's bark, and ſnake-root, &c. Chalybeate waters are found to be beneficial in this caſe. The cold bath is likewiſe of ſingular ſervice, and ought never to be neglected when the patient can bear it.

OF NERVOUS, HYSTERIC, AND HYPOCHONDRIAC DISORDERS.

Of all diſeaſes incident to mankind, thoſe of the nervous kind are the moſt complicated and difficult to cure. A volume would not be ſufficient to point out their various ſymptoms. They imitate almoſt every diſeaſe ; and are ſeldom alike in two different perſons, or even in the ſame perſon at different times. Like Proteus, they are continually

* Evacuations, eſpecially repeated bleedings, are not in general adapted to the cure of this diſeaſe ; and the tonics, as bark and ſteel, are of more univerſal application.

changing ſhape; and upon every freſh attack, the patient thinks he feels ſymptoms which he never experienced before. Nor do they only affect the body, the mind likewiſe ſuffers, and is often thereby rendered extremely weak and peeviſh. The low ſpirits, timorouſneſs, melancholy, and ficklenes of temper, which generally attend nervous diſorders, induce many people to believe, that they are entirely diſeaſes of the mind; but this change of temper is rather a conſequence, than the cauſe of nervous diſeaſes.

CAUSES.——Every thing that tends to relax or weaken the body, prediſpoſes it to nervous diſeaſes, as indolence, exceſſive venery, drinking great quantities of tea, or other weak watery liquors, frequent bleeding, purging, vomiting, &c. Whatever hurts the digeſtion, or prevents the proper aſſimilation of the aliment, has likewiſe this effect; as long faſting, exceſs in eating or drinking, the uſe of windy, crude, or unwholſome aliments, a bending poſture of the body, &c.

Nervous diſorders often proceed from affections of the mind, as grief, diſappointments, anxiety, intenſe ſtudy, &c. Few ſtudious perſons are free from nervous diſeaſes. Nor is this at all to be wondered at; intenſe thinking not only preys upon the ſpirits, but prevents the perſon from taking proper exerciſe, by which means the digeſtion is impaired, the nouriſhment prevented, the ſolids relaxed, and the whole maſs of humours vitiated. Grief and diſappointment likewiſe produce the ſame effects. I have known more hyſteric and hypochondriac patients, who dated the commencement of their diſorders from the loſs of a huſband, a favourite child, or from ſome diſappointment in life, than from any other cauſe. In a word, whatever weakens the body, or depreſſes the ſpirits, may occaſion

nervous

nervous diſorders; as unwholeſome air, want of ſleep, great fatigue, &c.

SYMPTOMS.——We ſhall only mention ſome of the moſt general ſymptoms of theſe diſorders, as it would be both an uſeleſs and impracticable taſk to point out the whole. They generally begin with windy inflations or diſtenſions of the ſtomach and inteſtines, eſpecially under the falſe ribs of the left ſide, where a hard tumour may ſometimes be perceived. The appetite and digeſtion are generally bad; yet ſometimes there is an uncommon craving for food, and a quick digeſtion. The food often turns ſour on the ſtomach; and the patient is troubled with vomiting of clear water, tough phlegm, or a blackiſh coloured liquor reſembling the grounds of coffee. Excruciating pains are often felt about the navel, attended with a rumbling or murmuring noiſe in the bowels. The belly is ſometimes looſe, but more commonly bound, which occaſions a retention of wind and great uneaſineſs.

The urine is ſometimes in ſmall quantity, at other times very copious, and quite clear. There is a great ſtraitneſs of the breaſt, with difficulty of breathing; violent palpitations of the heart; ſudden fluſhings of heat in various parts of the body; at other times a ſenſe of cold, as if water were poured on them; flying pains in the arms and limbs; pains in the back and belly, reſembling thoſe occaſioned by gravel; the pulſe very variable, ſometimes uncommonly ſlow, and at other times very quick; yawning, the hiccup, frequent ſighings, and a ſenſe of ſuffocation, as if from a ball or lump in the throat; alternate fits of crying and convulſive laughing; the ſleep is unſound, and ſeldom refreſhing; and the patient is often troubled with the night-mare.

As the diſeaſe increaſes, the patient is moleſted with head-achs, cramps, and fixed pains in various

parts of the body; the eyes are clouded, and often affected with pain and dryneſs; there is a noiſe in the ears, and often a dullneſs in hearing; in ſhort, the whole animal functions are impaired.—The mind is diſturbed on the moſt trivial occaſions and is hurried into the moſt perverſe commotions, inquietudes, terror, ſadneſs, anger, diffidence, &c. The patient is apt to entertain wild imaginations, and extravagant fancies; the memory becomes weak, and the reaſon fails. Nothing is more characteriſtic of this diſeaſe than a conſtant dread of death. This renders the patients peeviſh, fickle, impatient, and apt to run from one phyſician to another, which is one reaſon why they ſeldom reap any benefit from medicine, as they have not ſufficient reſolution to perſiſt in any one courſe till it has time to produce its proper effects. They are likewiſe apt to imagine that they labour under diſeaſes from which they are quite free, and are very angry if any one attempts to laugh them out of their ridiculous notions.

REGIMEN.—Hyſteric and hypochondriac perſons ought never to faſt long. Their food ſhould be ſolid and nouriſhing, but of eaſy digeſtion. Fat meats and heavy ſauces are hurtful. All exceſs ſhould be carefully avoided. They ought never to eat more at a time than they can eaſily digeſt. Heavy ſuppers are to be avoided. If the patient feels himſelf weak and faint between meals, he ought to eat a bit of bread, and drink a glaſs of wine. Though wine in exceſs enfeebles the body, and impairs the faculties of the mind, yet, taken in moderation, it ſtrengthens the ſtomach, and promotes digeſtion. Wine and water is a very proper drink at meals. If wine ſours on the ſtomach, or the patient is much troubled with wind, brandy and water will anſwer better. Every thing that is windy or hard of digeſtion muſt be avoided. All

weak

weak and warm liquors are hurtful, as tea, coffee, punch, &c. People may find a temporary relief from theſe, but they always increaſe the malady, as they weaken the ſtomach, and hurt digeſtion. Above all things, drams are to be avoided. Whatever immediate eaſe the patient may feel from the uſe of ardent ſpirits, they are ſure to aggravate the malady, and prove certain poiſons at laſt. Theſe cautions are the more neceſſary here, as hyſteric and hypochondriac perſons are peculiarly fond of tea and ardent ſpirits, to the uſe of which many of them fall a victim.

Exerciſe is of ſuch importance in nervous diſorders, that it is worth all other medicines. Riding on horſeback is generally eſteemed the beſt, as it gives motion to the whole body, without fatiguing it. I have known ſome patients, however, with whom walking agreed better, and others who were moſt benefited by riding in a machine. Every one ought to uſe that which he finds moſt beneficial. Long ſea-voyages have an excellent effect; and to thoſe who can afford to take them, and have ſufficient reſolution, we would recommend this courſe. Even change of place and the ſight of new objects, by diverting the mind, have a great tendency to remove theſe complaints. For this reaſon a long journey, or a voyage, is of much more advantage than riding ſhort journeys near home.

A cool and dry air is the beſt, as it braces and imparts vigour to the whole body. Nothing tends more to relax and enervate than hot air, eſpecially that which is rendered ſo by great fires, or ſtoves in ſmall apartments. But when the ſtomach or bowels are weak, the body ought to be well guarded againſt cold, eſpecially in winter, by wearing a thin flannel waiſtcoat next the ſkin. This will keep up an equal perſpiration, and defend the alimentary canal from many impreſſions, to which it would otherwiſe be ſubject, upon

every

every ſudden change from warm to cold weather. Rubbing the body frequently with a fleſh-bruſh, or a coarſe linen cloth, is likewiſe beneficial, as it promotes the circulation, perſpiration, &c. Perſons who have weak nerves ought to riſe early, and take exerciſe before breakfaſt, as lying too long a-bed cannot fail to relax the ſolids. They ought likewiſe to be diverted, and to be kept as eaſy and chearful as poſſible. Nothing hurts the nervous ſyſtem, or weakens the digeſtive powers, more than fear, grief, or anxiety.

MEDICINES.——Though nervous diſeaſes are ſeldom radically cured, yet their ſymptoms may ſometimes be alleviated, and the patient's life rendered at leaſt more comfortable by proper medicines.

When the patient is coſtive, he ought to take a little rhubarb, or ſome other mild purgative *, and ſhould never ſuffer his belly to be long bound. All ſtrong and violent purgatives are, however, to be avoided, as aloes, jalap, &c. I have generally ſeen an infuſion of ſenna and rhubarb in brandy anſwer very well. This may be made of any ſtrength, and taken in ſuch quantity as the patient finds neceſſary.

When the digeſtion is bad, and the ſtomach relaxed and weak, bitters will be of ſervice. The beſt of theſe are the Jeſuits bark and gentian-root, which may be prepared and uſed in the following manner. Take Jeſuits bark in powder, an ounce and a half, gentian-root and orange-peel bruiſed, of each half an ounce. Infuſe theſe ingredients in a bottle of brandy or whiſky, for five or ſix days, then

* The Caſtor-oil makes a very proper laxative in this caſe. A table-ſpoonful will commonly anſwer the purpoſe, to which, if the patient be ſqueamiſh, a tea-ſpoonful of rum may be added.

then ſtrain the liquor, and take a table-ſpoonful in half a glaſs of water, an hour before breakfaſt, dinner, and ſupper.

Nothing tends more to ſtrengthen the nervous ſyſtem than cold bathing. This practice, if duly perſiſted in, will produce very extraordinary effects; but when the liver or other *viſcera* are obſtructed, or otherwiſe unſound, the cold bath is improper. The moſt proper ſeaſons for it are ſummer and autumn. It will be ſufficient, eſpecially for perſons of a ſpare habit, to go into the cold bath three or four times a-week. If the patient be weakened by it, or feel chilly for a long time after coming out, it is improper.

In patients afflicted with wind, I have always obſerved the greateſt benefit from the acid elixir of vitriol. It may be taken in the quantity of fifteen, twenty, or thirty drops, twice or thrice a-day, in a glaſs of water. This both expels wind, ſtrengthens the ſtomach, and promotes digeſtion.

Opiates are greatly extolled in theſe maladies; but as they only palliate the ſymptoms, and generally afterwards increaſe the diſeaſe, we would adviſe people to be extremely cautious in the uſe of them, leſt habit render them at laſt abſolutely neceſſary.

It would be an eaſy matter to enumerate many medicines which have been extolled for relieving nervous diſorders; but whoever wiſhes for a thorough cure muſt expect it from regimen alone; we ſhall therefore omit mentioning more medicines, and again recommend the ſtricteſt attention to DIET, AIR, EXERCISE, and AMUSEMENTS*.

OF

* Under the general head of Nervous Diſorders, our author has thought proper to conſider hyſteric and hypochondriac affections. Theſe two diſeaſes, however, though ſometimes conjoined, and frequently

OF MELANCHOLY AND MADNESS.

MELANCHOLY and madneſs are nearly allied. They proceed both from the ſame origin, and may be conſidered as only different degrees of the ſame diſeaſe.

quently marked by ſeveral ſymptoms in common, yet are often diſtinct, and exhibit ſymptoms peculiar to each. Of this our author ſeems afterwards to have been ſenſible, as we obſerve in a later edition he has treated them ſeparately. We ſhall therefore add a few obſervations on each of theſe diſeaſes, in ſo far as they differ in reſpect of the ſymptoms, and eſpecially in the method of cure; while we ſhall refer to the general head of nervous diſorders, for the ſymptoms and treatment of the two diſeaſes, in ſo far as they are ſimilar. *The hyſteric diſeaſe* is almoſt peculiar to the female ſex. It occurs chiefly from puberty to the age of forty years; and then eſpecially about the period of menſtruation. Females of a ſanguine plethoric habit are chiefly ſubject to this diſeaſe, and of theſe the unmarried and the barren, more than the married and breeding women. *The hypochondriac diſeaſe*, again, occurs in both ſexes, though perhaps more frequently in the male; it occurs too, eſpecially after the middle period of life, in thoſe of a melancholy temperament, and of a firm and rigid habit. Stomachic affections, too, more frequently accompany this diſeaſe, while ſpaſmodic affections more commonly attend the former. The hyſteric affection, too, generally attacks in fits or paroxyſms, beginning with a grumbling noiſe in the bowels, attended with the ſenſation of a ball riſing from the under part of the belly towards the throat, occaſioning a feeling of ſtrangulation there; the patient is affected with ſtupor and inſenſibility, and the body ſuffers various convulſions. Theſe ſymptoms may in general ſerve to diſtinguiſh this diſeaſe from the hypochondriac, which is a leſs violent, though more conſtant diſeaſe. As to the *method of treatment*, as hyſteric affections ſeem to depend chiefly on a preternatural degree of mobility or ſenſibility in the ſyſtem, and as this again appears to proceed either from too great a fulneſs of the ſyſtem or from weakneſs, ſo our remedies ought principally to be directed to correct theſe. Fulneſs of the ſyſtem may be obviated by evacuations, as blood-letting, &c. it is often more ſafely effected, however, by the uſe of a ſpare diet and plenty of exerciſe. Weakneſs of the ſyſtem is to be corrected by the uſe of tonic and ſtrengthening remedies, as bark, ſteel, and the cold bath, frequent exerciſe in the open air, a nouriſhing diet of animal food, with a moderate uſe of wine. As hypochondriacal affections, again, are generally accompanied with a rigid

habit

diſeaſe. *A delirium without a fever* is the common definition of madneſs. Indeed it is not a very accurate one, but there is no great occaſion to be ſolicitous about the definition of a diſeaſe which every body knows. It is of far greater importance to know how it is occaſioned, and by what means it may be cured.

CAUSES.——It may proceed from a hereditary diſpoſition, intenſe thinking, eſpecially where the mind is long occupied about one object, violent paſſions or affections of the mind, as love, fear, joy, grief, overweening pride, and ſuch like. It may alſo be occaſioned by exceſſive venery, narcotic or ſtupefactive poiſons, a ſedentary life, ſolitude, the ſuppreſſion of cuſtomary evacuations, acute fevers, or other diſeaſes. Violent anger will change melancholy into madneſs; and exceſſive cold, eſpecially of the lower extremities, will force the blood into the brain, and produce all the ſymptoms of madneſs. It may likewiſe proceed from the uſe of aliment that is hard of digeſtion, or which cannot be eaſily aſſimilated; from a callous ſtate of the integuments of the brain, or a dryneſs of the brain itſelf. To all which we may add gloomy or miſtaken notions of religion *.

SYMP-

habit and a tenſe fibre, ſo the tonic remedies are not ſo ſafe here; while the warm bath, and a free uſe of warm diluting drink, as tea, coffee, &c. ſo hurtful in the former diſeaſe, are frequently of the greateſt advantage in this complaint. The management of the patient's mind in this diſeaſe, too, requires the utmoſt attention Idleneſs and inactivity are carefully to be avoided; and ſuch purſuits as may amuſe and agreeably occupy the mind are to be diligently followed. Thoſe, however, which ſufficiently engage the attention at the ſame time that they require ſome bodily exertion, are to be preferred; as the country-ſports of hunting, ſhooting, travelling, &c. with agreeable ſociety in the hours of relaxation.

* The mind, by dwelling too long upon the dark ſide of religion, is often, at length, overwhelmed with the deepeſt melancholy, which ends in madneſs. What a pity that *religion*, which was intended to alleviate

SYMPTOMS.——When perſons begin to be melancholy, they are dull, dejected, timorous, watchful, fond of ſolitude, fretful, fickle, captious, and inquiſitive, ſolicitious about trifles, ſometimes niggardly, at other times prodigal. The belly is generally bound, the urine thin, and in ſmall quantity, the ſtomach and bowels inflated with wind, the complexion pale, the pulſe ſlow and weak. The functions of the mind are alſo greatly perverted, inſomuch that the patient often imagines himſelf dead, or changed into ſome other animal. Some have imagined their bodies were made of glaſs, or other brittle ſubſtances, and were afraid to move leſt they ſhould be broken in pieces. The unhappy patient, in this caſe, unleſs carefully watched, is apt to put an end to his own miſerable life.

The ſigns of approaching madneſs are, redneſs of the eyes, with a tremulous and conſtant vibration of the eye-lids, a change of diſpoſition and behaviour, ſupercilious looks, a haughty carriage, grinding of the teeth, unaccountable malice to particular perſons, exceſſive watchfulneſs, violent headachs, quickneſs of hearing, noiſe in the ears, &c.

Perſons actually mad are in an exceſſive rage when provoked to anger. Some wander about, others make a hideous noiſe. Some ſhun the ſight of men, others, if permitted, would tear themſelves or thoſe whom they meet to pieces. Some, in the higheſt degree of the diſorder, ſee images before their eyes, and fancy themſelves ſtruck with lightning. To theſe we may add incredible ſtrength, and great inſenſibility to hunger and cold.

When the diſeaſe is owing to an obſtruction of cuſtomary evacuations, or any bodily diſorder, it is

alleviate the calamities of life, to keep the mind chearful, and to raiſe it above diſappointments, ſhould ever be perverted into the means of producing thoſe very evils it was deſigned to cure!

is eaſier cured than when it proceeds from the mind. Madneſs attended with mirth is not ſo dangerous as that which is accompanied with ſadneſs. A diſcharge of blood from the noſe, a violent looſeneſs, ſcabby eruptions, the bleeding piles, or the *menſes*, ſometimes carry off this diſeaſe.

Diſeaſes of the mind often intermit for ſeveral years, and return again. In ſome they return annually at the ſolſtices; in others, about the time of the equinoxes. Sometimes the raving fits obſerve the lunar periods; in which caſe the diſeaſe is thought to have ſome affinity with the epilepſy.

REGIMEN.——The diet ought to conſiſt chiefly of vegetables of a cooling and opening quality. Animal food, eſpecially ſalted or ſmoke-dried fiſh or fleſh, ought to be avoided. All kinds of ſhell-fiſh are bad. Aliments prepared with onions, garlic, or any thing that generates thick blood, are likewiſe improper. All kind of fruits that are wholeſome may be eat with advantage. Boerhaave gives an inſtance of a patient who, by a long uſe of whey, water, and garden-fruits, evacuated a great quantity of black-matter, and recovered his ſenſes. This ſeems to have been the method of cure practiced at the Aſſyrian Court; where we find the monarch himſelf, when ſeized with maddneſs, was turned out to graze.

Strong liquors of every kind ought to be avoided as poiſon. The moſt proper drink is water, whey, or very ſmall beer. Tea and coffee are improper. If honey agrees with the patient, it may be eat freely, or his drink ſweetened with it. Infuſions of balm-leaves, penny-royal, the roots of wild valerian, or the flowers of the lime-tree, may be drank freely, either by themſelves, or ſweetened with honey, as the patient ſhall chuſe.

The patient ought to take as much exerciſe in the open air as he can bear. This helps to diſſolve the

the viſcid humours; it removes obſtructions, promotes the perſpiration, and all the other ſecretions. Every kind of madneſs is attended with a diminiſhed perſpiration; all means ought therefore to be uſed to promote that neceſſary and ſalutary diſcharge. Nothing can have a more direct tendency to increaſe the diſeaſe, than the common method of confining the patient to a cloſe apartment. Were a proper ſpace allotted for him to run about in, where he could neither hurt himſelf nor others, it would contribute much to promote a cure. It would have ſtill a better effect, if he were obliged to labour a piece of ground. By digging, hoeing, planting, ſowing, &c. both the body and mind would be exerciſed.

A plan of this kind, with a ſtrict vegetable diet, would be a more rational method of cure than confining the patient in Bedlam, or ſending him to a private mad-houſe. Theſe inſtitutions, as they are generally managed, are far more likely to make a wiſe man mad, than to reſtore a madman to his ſenſes. Even running about at large, though it may be attended with ſome bad conſequences, is more likely to reſtore the patient than confining him in a mad-houſe. I have known ſeveral inſtances of perſons cured by exerciſe, amuſements, and a vegetable diet, who, in all probability, had they been confined, would have continued lunatics for life. A long journey, or a voyage, eſpecially into a warmer climate, with agreeable companions, has often very happy effects.

MEDICINE.——In the cure of madneſs, great regard muſt be paid to the mind. When the patient is in a low melancholy ſtate, his mind ought to be ſoothed and diverted with variety of amuſements, as entertaining ſtories, paſtimes, muſic, &c. This ſeems to have been the method of curing melancholy among the Jews, as we learn from the

ſtory

ſtory of King Saul; and indeed it is a very rational one. Nothing can remove diſeaſes of the mind ſo effectually as applications to the mind itſelf, the moſt efficacious of which is muſic. The patient's company ought likewiſe to conſiſt of ſuch perſons as are agreeable to him. People in this ſtate are apt to conceive unaccountable averſions againſt particular perſons; and the very ſight of ſuch perſons is ſufficient to diſtract their minds, and throw them into the utmoſt perturbation. In all kinds of madneſs, it is better to ſooth and calm the mind, than to ruffle it by contradiction.

When the patient is high, evacuations are neceſſary. In this caſe he muſt be bled, and have his belly kept open by purging medicines, as manna, rhubarb, cream of tartar, or the ſoluble tartar. I have ſeen the laſt have very good effects. It may be taken in the doſe of half an ounce, diſſolved in water-gruel every day, for ſundry weeks, or even for months, if neceſſary. More or leſs may be given according as it operates. Vomits have likewiſe a good effect; but they muſt be pretty ſtrong, otherwiſe they will not operate.

Madneſs has ſometimes been cured by camphor. Ten or twelve grains of it may be rubbed in a mortar with half a dram of nitre, and taken twice a-day, or oftener if the ſtomach will bear it. If it will not ſit upon the ſtomach in this form, it may be made into pills with gum aſafœtida and Ruſſian caſtor, and taken in the quantity above directed. Muſk has likewiſe been found efficacious in this caſe; but to have any effect, it muſt be given in large doſes. A ſcruple or twenty-five grains may be made into a bolus with a little honey or ſyrup, and taken twice or thrice a-day. The antimonial wine is by ſome extolled for the cure of madneſs. It may be taken in the doſe of forty or fifty drops, twice or thrice a-day, in a cup of tea. The tinc-

ture of hellebore has likewiſe been in great eſteem; but I never ſaw any conſiderable effects from it. Each of the above medicines may be of ſervice in ſome particular caſe, provided it be duly perſiſted in, and where one fails, it may not be amiſs to try another.

As it is very difficult to induce patients in this diſeaſe to take medicines, we ſhall mention ſome outward applications which ſometimes do good; the principal of theſe are iſſues, ſetons, and cold bathing. Iſſues may be made in any part of the body, but they generally have the beſt effect near the ſpine of the back. The diſcharge from theſe may be greatly promoted by dreſſing them with the mild bliſtering-ointment, and keeping what are commonly called the orrice-peas in them. The ſalt water is moſt proper for bathing in; but when that cannot be obtained, the patient may be daily immerſed in freſh water. Some recommend bathing the body in warm water, and at the ſame time pouring cold water upon the head.

That kind of madneſs or delirium which proceeds from mere weakneſs, requires a quite different method of treatment. It is often the effect of fevers injudiciouſly treated, wherein the patient's ſtrength has been exhauſted by frequent bleedings and purgings. This muſt be removed by nouriſhing diet, exerciſe proportioned to the patient's ſtrength, and cordial medicines. All evacuations are here carefully to be avoided. The patient may take frequently a glaſs of good wine, in which a little Jeſuits bark has been infuſed.

OF

OF POISONS.

EVERY perſon ought, in ſome meaſure, to be acquainted with the nature and cure of poiſons. They are generally taken unawares, and their effects are often ſo ſudden and violent, as not to admit of delay, or allow time to procure the aſſiſtance of phyſicians. Indeed no great degree of medical knowledge is here neceſſary, the remedies for moſt poiſons being generally at hand, or eaſily obtained, and nothing but common prudence needful in the application of them.

The vulgar notion that every poiſon is cured by ſome counter poiſon, as a ſpecific, has done much hurt. People believe they can do nothing for the patient, unleſs they know the particular antidote to that kind of poiſon which he has taken. Whereas the cure of all poiſons taken into the ſtomach, without exception, depends on diſcharging them as ſoon as poſſible.

There is no caſe wherein nature points out the method of cure more clearly than in this. Poiſon is ſeldom long in the ſtomach before it occaſions ſickneſs, with an inclination to vomit. This ſhews plainly what ought to be done. Indeed common ſenſe dictates to every man, that, if any thing has been taken into the ſtomach which endangers life, it ought immediately to be diſcharged. Were this duly regarded, moſt of the miſchief occaſioned by poiſon might be prevented. The method of cure is obvious, and the means of performing it are in the hands of every man,

Poiſons either belong to the animal, vegetable, or mineral kingdom.

Mineral poiſons are commonly of an acrid or corroſive quality, as arſenic, the corroſive ſublimate of mercury, &c.

Thoſe of the vegetable kind are generally of a narcotic or ſtupifactive quality, as poppy, hemlock, henbane, berries of the deadly night-ſhade, &c.

Poiſonous animals communicate their infection, either by the bite or ſting. This poiſon is very different from the former, both in its ſymptoms and cure.

MINERAL POISONS.——Arſenic is the moſt common of this claſs; and, as the whole of them are pretty ſimilar both in their effects and method of cure, what is ſaid with reſpect to it will be applicable to every other ſpecies of corroſive poiſon.

When a perſon has taken arſenic, he ſoon perceives a burning heat, and violent pricking pain, in his ſtomach and bowels, with vomiting and intolerale thirſt. The tongue and throat feel rough and dry; and, if proper help be not ſoon adminiſtered, the patient is ſeized with great anxiety, hiccupping, faintings, and coldneſs of the extremities. To theſe ſucceed black vomits, fœtid ſtools, with a mortification of the ſtomach and inteſtines, which are the immediate forerunners of death.

On the firſt appearance of theſe ſymptoms, the patient ſhould drink large quantities of new milk and ſalad-oil, till he vomits; or he may drink warm water mixed with oil. Fat broths are alſo proper, provided they can be got ready in time. Where no oil is to be had, freſh butter may be melted and mixed with the milk or water. Theſe things are to be drank as long as the inclination to vomit continues. Some have drank eight or ten Engliſh quarts

quarts before the vomiting ceaſed; and it is never ſafe to leave off drinking while one particle of the poiſon remains in the ſtomach.

Theſe oily or fat ſubſtances not only provoke vomiting, but likewiſe blunt the acrimony of the poiſon, and prevent its wounding the bowels; but if they ſhould not make the perſon vomit, half a dram or two ſcruples of the powder of ipecacoanha muſt be given, or a few ſpoonfuls of the oxymel of ſquills mixed with the water which he drinks. Vomiting may likewiſe be excited by tickling the inſide of the throat with a feather.

If the tormenting pains are felt in the lower belly, and there is reaſon to fear that the inteſtines are attacked, clyſters of milk and oil muſt be very frequently thrown up; and the patient muſt drink emollient decoctions of barley, oat-meal, marſh-mallows, and ſuch like *.

After the poiſon has been evacuated, the patient ought, for ſome time, to live upon ſuch things as are of a healing and cooling quality; to abſtain from fleſh and all ſtrong liquors; and to live upon milk, broth, gruel, light puddings, and other ſpoon-meats of eaſy digeſtion. His drink ſhould be barley-water, linſeed-tea, or infuſions of any of h e mucilaginous vegetables.

VEGETABLE POISONS, beſides heat and pain of the ſtomach, commonly occaſion ſome degree of giddineſs, and often a kind of ſtupidity or folly. Perſons who have taken theſe muſt be treated in the ſame manner as for the mineral or corroſive.

Though the vegetable poiſons, when allowed to remain in the ſtomach, often prove fatal; yet the

* In this caſe he ought likewiſe to take ſome gentle laxative by the mouth, as an ounce or ten drams of caſtor-oil, or an ounce and a half or two ounces of Glauber's ſalts, &c.

danger is generally over as ſoon as they are diſcharged. Not being of ſuch a cauſtic or corroſive nature, they are leſs apt to wound and inflame the bowels than mineral ſubſtances; no time, however, ought to be loſt in having them expelled the ſtomach.

Opium, being frequently taken by miſtake, merits particular attention. It is uſed as a medicine both in a ſolid and liquid form, which latter commonly goes by the name of laudanum. It is indeed a valuable medicine when taken in proper quantity; but as an over doſe proves ſtrong poiſon, we ſhall point out its common effects, together with the method of cure.

Too great a quantity of opium generally occaſions great drowſineſs, with ſtupor and other apoplectic ſymptoms. Sometimes the perſon has ſo great an inclination to ſleep, that it is almoſt impoſſible to keep him awake. Every method muſt, however, be tried for this purpoſe. He ſhould be toſſed, ſhaked, and moved about. Sharp bliſtering-plaſters ſhould be applied to his legs or arms, and ſtimulating medicines, as ſalts of hartſhorn, &c. held under his noſe. It will alſo be proper to let blood. At the ſame time every method muſt be taken to make him diſcharge the poiſon. This may be done in the manner directed above, viz. by the uſe of ſtrong vomits, drinking plenty of warm water with oil, &c.

Mead, beſides vomits, in this caſe recommends acid medicines with lixivial ſalts. He ſays, that he has often given ſalt of wormwood mixed with juice of lemon, in repeated doſes, with great ſucceſs.

If the body ſhould remain weak and languid after the poiſon has been diſcharged, nouriſhing diet and cordials will be neceſſary; but when there is reaſon to fear that the ſtomach or bowels

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are inflamed, the greateſt circumſpection is neceſſary, both with regard to food and medicine.

ANIMAL POISONS.——We ſhall begin with the bite of a mad dog, as it is both the moſt common and dangerous animal-poiſon in this country.

The creatures naturally liable to contract the hydrophobia are, ſo far as we yet know, all of the dog-kind, viz. dogs, foxes, and wolves. Of the laſt we have none in this iſland; and it ſo ſeldom happens that any perſon is bit by the ſecond, that they ſcarce deſerve to be taken notice of. If ſuch a thing ſhould happen, the method of treatment is preciſely the ſame as for the bite of a mad dog.

The ſymptoms of madneſs in a dog are as follow. At firſt he looks dull, ſhews an averſion to food and company: He does not bark as uſual, but ſeems to murmur, is peeviſh, and apt to bite ſtrangers: His ears and tail droop more than uſual, and he appears drowſy. Afterwards he begins to loll out his tongue, and froth at the mouth, his eyes ſeeming heavy and watery. He now, if not confined, takes off, runs panting along with a kind of dejected air; and endeavours to bite every one he meets. Other dogs are ſaid to fly from him. Some think this is a certain ſign of madneſs, ſuppoſing that they know him by the ſmell; but it is not to be depended on. If he eſcapes being killed, he ſeldom runs above two or three days, till he dies exhauſted with heat, hunger, and fatigue.

This diſeaſe is moſt frequent after long dry hot ſeaſons; and ſuch dogs as live upon putrid ſtinking carrion, without having enough of freſh water, are moſt liable to it.

When any perſon is bit by a dog, the ſtricteſt inquiry ought to be made, whether the animal be really mad. Many diſagreeable conſequences ariſe from neglecting to aſcertain this point. Some

people have lived in continual anxiety for many years, becauſe they had been bit by a dog which they believed to be mad; but, as he had been killed on the ſpot, it was impoſſible to aſcertain the fact. This ſhould induce us, inſtead of killing a dog the moment he has bit any perſon, to do all in our power to keep him alive, at leaſt till we can be certain whether he be mad or not.

Many circumſtances may contribute to make people imagine a dog mad. He loſes his maſter, runs about in queſt of him, is ſet upon by other dogs, and perhaps by men. The creature thus frightened, beat, and abuſed, looks wild, and lolls out his tongue as he runs along. Immediately a crowd is after him; while he, finding himſelf cloſely purſued, and taking every one he meets for an enemy, naturally attempts to bite in ſelf-defence. He ſoon gets knocked on the head, and paſſes currently for a mad dog, as it is then impoſſible to prove the contrary.

This being the true hiſtory of by far the greater part of thoſe dogs which paſs for mad, is it any wonder that numberleſs whimſical medicines have been extolled for preventing the effects of their bite? This readily accounts for the great variety of infallible remedies for the bite of a mad dog, which are to be met with in almoſt every family. Though not one in a thouſand has any claim to merit, yet they are all ſupported by numberleſs vouchers. No wonder that imaginary diſeaſes ſhould be cured by imaginary remedies. In this way credulous people firſt impoſe upon themſelves, and then deceive others. The ſame medicine that was ſuppoſed to prevent the effects of the bite when the dog was not mad, is recommended to a perſon who has had the misfortune to be bit by a dog that was really mad. He takes it, truſts to it, and is undone.

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To these mistakes we must impute the frequent ill success in preventing the effects of the bite of a mad dog. It is not owing so much to a defect in medicine, as to wrong applications. I am persuaded, if proper medicines were taken immediately after the bite is received, and continued for a sufficient length of time, we should not lose one in a thousand of those who have the misfortune to be bit by a mad dog.

This poison is generally communicated by a wound, which, nevertheless, heals as soon as a common wound: But afterwards it begins to feel painful, and as the pain spreads towards the neighbouring parts, the person becomes heavy and listless. His sleep is unquiet, with frightful dreams; he sighs, looks dull, and loves solitude. These are the forerunners, or rather the first symptoms, of that dreadful disease occasioned by the bite of a mad dog. But as we do not propose to treat the disease itself, but to point out the method of preventing it, we shall not take up time in shewing its progress from the first invasion to its commonly fatal end.

The common notion, that this poison may lie in the body for many years, and afterwards prove fatal, seems not to be well founded. It must render such persons as have had the misfortune to be bit very unhappy, and can have no good effects. If the person takes proper medicines for forty days after being bit, and feels no symptoms of the disease, there is reason to believe him out of danger. Some indeed have gone mad twelve months after being bit; but I never knew it happen later; and of this I only remember to have seen one instance.

The medicines recommended for preventing the effects of the bite of a mad dog, are chiefly such as promote urine and perspiration; to which may be added antispasmodics.

Dr

Dr Mead recommends a preventive medicine, which he ſays he never knew fail, though in the ſpace of thirty years he had uſed it a thouſand times.

The medicine is as follows:

"Take aſh-coloured ground liver-wort, cleaned, dried, and powdered, half an ounce; of black-pepper powdered, a quarter of an ounce. Mix theſe well together, and divide the powder into four doſes; one of which muſt be taken every morning faſting, for four mornings ſucceſſively, in half an Engliſh pint of cows milk warm.

After theſe four doſes are taken, the patient muſt go into the cold bath, or a cold ſpring or river, every morning faſting, for a month; he muſt be dipped all over, but not ſtay in (with his head above water) longer than half a minute, if the water be very cold. After this he muſt go in three times a-week for a fortnight longer.

The perſon muſt be bled before he begins to uſe the medicine *."

We ſhall next mention the famous Eaſt-India ſpecific, as it is called. This medicine is compoſed of cinnabar and muſk. It is eſteemed a great

* I was, ſome time ago, favoured with the following preſcription for the bite of a mad dog, which had been long kept a ſecret in a gentleman's family in the north of England, and is ſaid never to have failed, when given as a preventive, either to man or beaſt.—"Take ſix ounces of rue clean picked and bruiſed, four ounces of garlic pealed and bruiſed, four ounces of Venice treacle, four ounces of ſcraped tin or pewter. Boil all theſe ingredients in two Engliſh quarts of the beſt ale, in a veſſel cloſe covered, over a ſlow fire, for the ſpace of an hour; then ſtrain the liquor, and give eight or nine ſpoonfuls of it warm to an adult perſon every morning faſting, for three or four mornings running. Leſs may be given to a young perſon, or one of a weak conſtitution. Some of the ingredients may be bound upon the wound, if it can be conveniently done." This is ordered to be given within nine days after the bite. No doubt, the ſooner it is given the better. The doſe ordered for a horſe is twelve ſpoonfuls, the ſame quantity for a bullock; and for a ſheep, hog, or dog, four or five.

great antiſpaſmodic, and by many thought to be an infallible remedy for preventing the effects of the bite of a mad dog.

"Take native and factitious cinnabar, of each twenty-four grains, muſk ſixteen grains. Let theſe be made into a fine powder, and taken in a glaſs of arrack or brandy."

This ſingle doſe is ſaid to ſecure the perſon for thirty days, at the end of which it muſt be repeated; but if he has any ſymptoms of the diſeaſe, it muſt be repeated in three hours.

The following is likewiſe a good antiſpaſmodic medicine.

Take of Virginian ſnake-root in powder, half a dram, gum aſafœtida twelve grains, gum camphor ſeven grains; make theſe into a bolus with a little ſyrup of faffron.

Camphor may alſo be given in the following manner:

Take purified nitre half an ounce, Virginian ſnake-root in powder two drams, camphor one dram; rub them together in a mortar, and divide the whole into ten doſes.

Mercury is another medicine of great efficacy, both in the prevention and cure of this kind of madneſs. When uſed as a preventive, it will be ſufficient to rub daily a dram of the ointment into the parts about the wound.

Vinegar is likewiſe of conſiderable ſervice, and ſhould be taken freely, either in the patient's food or drink.

Theſe are the principal medicines recommended for preventing the effects of the bite of a mad dog. We would not, however, adviſe people to truſt to any one of them; but from a proper combination of their different powers, there is the greateſt reaſon to hope for ſucceſs.

The great error in the uſe of theſe medicines lies in

in not taking them for a ſufficient length of time. They are uſed more like charms than medicines intended to produce any change in the body. To this, and not to the inſufficiency of the medicines, muſt we impute their frequent want of ſucceſs.

Dr Mead ſays, that the virtue of his medicine conſiſts in promoting urine. But how a poiſon ſhould be expelled by urine, with only three or four doſes of any medicine, however powerful, is not eaſy to conceive. More time is certainly neceſſary; and here the defect of the Doctor's preſcription ſeems to lie.

The Eaſt-India ſpecific is ſtill more exceptionable on this account.

As theſe and moſt other medicines, taken ſingly, have frequently been found to fail, we ſhall recommend the following courſe.

If a perſon be bit in a fleſhy part, where there is no hazard of hurting any large blood-veſſel, the parts adjacent to the wound may be cut away. But if this be not done ſoon after receiving the bite, it will be better to omit it *.

The wound may be waſhed with ſalt and water, or a pickle made of vinegar and ſalt, and afterwards dreſſed twice a-day with yellow baſilicon, mixed with ſome red precipitate.

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* We think it proper to obſerve here, that, notwithſtanding of all the boaſted ſpecifics for preventing this diſeaſe, nothing hitherto diſcovered deſerves in the ſmalleſt degree to be truſted to, but the cutting out the part. This ought therefore to be performed as ſoon after the accident as poſſible; but where it has unavoidably been delayed for hours, or even for ſome days after the accident, ſtill it ought to be performed, as we are uncertain of the length of time neceſſary, in the application of this poiſon, to produce diſeaſe, and as it is probable from analogy, that this, like ſome other poiſons, produces at firſt only a local diſeaſe, with inflammation and ſuppuration, and that the ſyſtem becomes afterwards affected from abſorption. As a farther ſecurity, after taking out the piece, an eſchar may be formed on the part by means of a cauſtic, and when this falls off, the place may be kept open by dreſſing it with iſſue-ointment for ſome time.

The patient ſhould begin to uſe either Dr Mead's medicine, or ſome of the others mentioned above. If he takes Mead's medicine, he may uſe it as the Doctor directs for four days ſucceſſively. Let him then omit it for two or three days, and again repeat the ſame number of doſes as before.

During this courſe, he muſt rub into the parts about the wound, daily, one dram of the mercurial or blue ointment, as it is called. This may be done for ten or twelve days at leaſt.

When this courſe is over, he may take a purge or two, and then begin to uſe the cold bath. This muſt be uſed every morning for five or ſix weeks; but if the patient ſhould feel cold and chilly for a long time after coming out of the cold bath, it will be better to uſe a tepid one, or to have the water a little warmed.

In the mean time, we would adviſe him not to leave off all internal medicines, but to take either one of the boluſes of ſnake-root, aſafœtida and camphor, or one of the powders of nitre, camphor, and ſnake-root, twice a-day. Theſe may be continued for a fortnight or three weeks longer.

If the perſon has gone through the above courſe of medicine, and no ſymptoms of madneſs appear, he may be reckoned out of danger. It will nevertheleſs be adviſeable, for the greater ſafety, to take a doſe or two of Dr Mead's medicine, at every full or change of the moon, for the three or four ſucceeding months.

During the uſe of the mercurial ointment, the patient muſt keep within doors, and take nothing cold.

A proper regimen muſt be obſerved during the whole courſe. The patient ſhould abſtain from fleſh, and all ſalted and high-ſeaſoned proviſions. He muſt avoid ſtrong liquors, and live moſtly upon

on a light and rather ſpare diet. His mind ſhould be kept as eaſy and chearful as poſſible, and all exceſſive heat and violent paſſions avoided with the utmoſt care.

I have never ſeen this courſe of medicine, with proper regimen, fail to prevent the hydrophobia; and cannot help again obſerving, that the want of ſucceſs muſt generally be owing either to the application of improper medicines, or not uſing proper ones for a ſufficient length of time.

Mankind are extremely fond of every thing that promiſes a ſudden or miraculous cure. By truſting to theſe they often loſe their lives, when a regular courſe of medicine would have rendered them abſolutely ſafe. This holds remarkably in the preſent caſe: Numbers of people, for example, believe if they or their cattle be once dipped in the ſea, it is ſufficient; as if the ſalt water were a charm againſt the effects of the bite. This and ſuch like whims have proved fatal to many.

Some people believe, if a perſon be bit by a dog that is not mad, if he ſhould go mad afterwards, that the perſon will be ſeized with the diſorder at the ſame time. This notion is too ridiculous to deſerve a ſerious confutation *.

The next poiſonous animal that we ſhall mention is the VIPER. The greaſe of this animal rubbed into the wound is generally reckoned a cure for the bite. Though this is all that the viper-catchers commonly do when they are bit, I ſhould hardly think it ſufficient for the bite of an *enraged* viper. It would ſurely be more ſafe to have the

* It is ſurpriſing that no proper inquiry has ever been made into the truth of the common opinion, that a dog which has been wormed cannot bite after he goes mad. This circumſtance not only merits the attention of phyſicians, but of the legiſlature. If the fact could be aſcertained, and the practice rendered general, it would ſave both the lives and properties of many.

the wound well ſucked *, and afterwards rubbed with warm ſalad-oil. A poultice of bread and milk, with plenty of ſalad-oil in it, ſhould likewiſe be applied to the wound, and the patient ought to drink freely of wine-whey with ſome ſpirits of hartſhorn; or if that be not at hand, of water-gruel with vinegar in it, to make him ſweat. If the patient be ſick, he may take a vomit. This courſe will be ſufficient for the bite of any of the poiſonous animals of this country.

With regard to poiſonous inſects, as the bee, waſp, hornet, &c. their ſtings are ſeldom attended with great danger, unleſs where a perſon happens to be ſtung by a number of them at once. In this caſe, ſomething ſhould be done to abate the pain and inflammation. Some, for this purpoſe, apply honey, others lay pounded parſley to the part. Some recommend a mixture of vinegar and Venice treacle; but I have always found rubbing the part with warm ſalad-oil ſucceed very well. Indeed, if the ſtings be ſo numerous as to endanger the patient's life, which is ſometimes the caſe, he muſt not only have oily poultices applied to the part, but muſt likewiſe be bled and take ſome cooling medicines, as nitre, cream of tartar, &c. with plenty of diluting liquors.

It is the happineſs of this iſland to have very few poiſonous animals, and even theſe are not of the

* The practice of ſucking out poiſons is very ancient; and indeed nothing can be more rational. It is the moſt likely method of extracting the poiſon where the bite cannot be cut out. There is no danger in performing this office, as the poiſon does no harm unleſs it be taken into the body by a wound. The perſon who ſucks the wound ought, however, to waſh his mouth frequently with ſalad-oil, which will ſecure him from even the leaſt inconveniency. The ancient Pſylli in Africa, and the Marſi in Italy, were famed for curing the bites of poiſonous animals, by ſucking the wound; and we are told, that the Indians in North America practice the ſame at this day.

the moſt virulent kind. Nine-tenths of the effects uſually attributed to poiſon or venom are really other diſeaſes, and depend upon quite different cauſes.

We cannot, however, make the ſame obſervation with regard to poiſonous vegetables. Theſe abound every where, and prove often fatal to the ignorant and unwary *. This indeed is, in a great meaſure, owing to careleſſneſs. Children ought early to be cautioned againſt eating any ſort of roots or berries which they do not know. We would likewiſe adviſe parents to deſtroy all poiſonous plants in their gardens, &c. or elſe to keep them in places where their children can have no acceſs.

But it is not children alone who ſuffer by eating poiſonous plants: We have every year accounts of adults poiſoned by eating hemlock-roots inſtead of parſnips, or ſome fungus which they gather for muſhrooms, &c. Theſe examples ought to put people upon their guard with reſpect to the former, and to put the latter entirely out of uſe.

OF

* The principal of theſe are, hemlock, henbane, monkſhood, columbine, hellebore, berries of the deadly night-ſhade, thorn-apple, all the ſpurges, and moſt muſhrooms, &c.

OF THE STONE AND GRAVEL.

When ſmall ſtones are lodged in the kidneys, or diſcharged along with the urine, the patient is ſaid to be afflicted with gravel. If one of theſe ſtones happen to make a lodgement in the bladder for ſome time, it accumulates freſh matter, and at length becomes too large to paſs off with the urine. In this caſe the patient is ſaid to have the ſtone.

CAUSES.——This diſeaſe may be occaſioned by high living; the uſe of ſtrong aſtringent wines *; a ſedentary life; lying too hot, ſoft, or too much on the back; the conſtant uſe of water which is impregnated with earthy or ſtony particles, aliments of an aſtringent or windy nature, &c. It may likewiſe proceed from an hereditary diſpoſition. Perſons in the decline of life, and thoſe who have been much afflicted with the gout or rheumatiſm, are moſt ſubject to it.

SYMPTOMS.——Small ſtones or gravel in the kidneys occaſion pain in the loins, ſickneſs, vomiting, and ſometimes bloody urine. When the ſtone deſcends into the *ureter*, and is too large to paſs along with eaſe, all the above ſymptoms are increaſed; the pain extends towards the bladder; the thigh and leg of the affected ſide feel be-

 numbed;

* It is a common notion, that the tartar in wine generates the ſtone; but there is more reaſon to believe, that its aſtringency, together with the fixed air contained in it, produce this effect. I know many perſons who never fail to paſs leſs urine, and to complain of a pain in their kidneys for ſeveral days after drinking freely of red wine.

numbed; the teſticles are drawn upwards, and the urine is obſtructed.

A ſtone in the bladder is known from a pain at the time, as well as before and after making water; from the urine coming away by drops, or ſtopping ſuddenly when in a full ſtream; by a violent pain in the neck of the bladder upon motion, eſpecially on horſeback, or in a coach, on rough road; from a white, thick, copious, ſtinking, mucous ſediment in the urine; from an itching in the top of the *penis*, from an inclination to go to ſtool while the urine is diſcharged, from the patient's paſſing his urine more eaſily when lying than in an erect poſture, and from a kind of convulſive motion occaſioned by the ſharp pain in diſcharging the laſt drops of the urine *.

REGIMEN.——Perſons afflicted with the gravel or ſtone ſhould avoid aliments of a windy or heating nature, as ſalt-meats, ſour fruits, &c. Their diet ought chiefly to conſiſt of ſuch things as tend to promote the ſecretion of urine, and to keep the belly open. Artichoaks, aſparagus, ſpinnage, lettuces, ſuccory, parſley, purſlane, turnips, potatoes, carrots, and radiſhes, may be ſafely eat. Onions, leeks, and cellery, are, in this caſe, reckoned medicinal. The moſt proper drink is whey, butter-milk, milk and water, barley-water, decoctions of the roots of marſh-mallows, parſley, liquorice, or of other mild mucilaginous vegetables, as linſeed, &c. If the patient has been accuſtomed to generous liquors, he may drink ſmall gin-punch without acid. But ſpirits muſt be uſed very ſparingly, as every thing that heats is hurtful.

Gentle exerciſe is proper; but if violent, it is apt to occaſion bloody urine. We would therefore adviſe

* It can be known with certainty only by the introduction of a ſtaff or ſound.

adviſe that it ſhould be taken in moderation. Perſons afflicted with gravel often paſs a great number of ſtones after riding on horſeback, or in a machine; but thoſe who have a ſtone in the bladder are ſeldom able to bear theſe kinds of exerciſe. Where there is a hereditary tendency to this diſeaſe, a ſedentary life ought never to be indulged. Were people careful, upon the firſt ſymptoms of gravel, to obſerve a proper regimen of diet, and to take ſufficient exerciſe, it might often be carried off, or at leaſt prevented from increaſing; but if the ſame courſe which occaſioned the diſeaſe be perſiſted in, it cannot fail to become worſe.

MEDICINE.——In what is called a fit of the gravel, which is commonly occaſioned by a ſtone ſticking in the *ureter*, or ſome part of the urinary paſſages, the patient muſt be bled, warm fomentations applied to the parts, emollient clyſters adminiſtered, and diluting mucilaginous liquors drank, &c. The treatment of this caſe has been fully pointed out under the articles, *Inflammation of the kidneys and bladder*, to which we refer the reader.

Dr Whyte adviſes patients who are ſubject to frequent fits of gravel in the kidneys, but have no ſtone in the bladder, to drink every morning, two or three hours before breakfaſt, an Engliſh pint of oyſter or cockle-ſhell lime-water. The Doctor very juſtly obſerves, that though this quantity might be too ſmall to have any ſenſible effect in diſſolving a ſtone in the bladder; yet it may very probably prevent its growth.

When a ſtone is formed in the bladder, the Doctor recommends Alicant ſoap, and oyſter or cockle-ſhell lime-water *, to be taken in the following manner.

* Oyſter-ſhell lime-water is prepared by pouring an Engliſh gallon and a half of boiling water upon a pound of oyſter-ſhells reduced to quick-lime by being burnt. Where oyſter or cockle-ſhells cannot be

manner. The patient muſt ſwallow every day, in any form that is leaſt diſagreeable, an ounce of the internal part of Alicant ſoap, and drink three or four Engliſh pints of oyſter or cockle-ſhell lime-water. The ſoap is to be divided into three doſes; the largeſt to be taken faſting in the morning early, the ſecond at noon, and the third at ſeven in the evening, drinking above each doſe a large draught of the lime-water; the remainder of which he may take any time betwixt dinner and ſupper, inſtead of other liquors.

The patient ſhould begin with a ſmaller quantity of the lime-water and ſoap than what is mentioned above; at firſt an Engliſh pint of the former, and three drams of the latter, taken daily, may be enough. This quantity, however, he may increaſe by degrees, and ought to perſevere in the uſe of theſe medicines, eſpecially if he finds any abatement of his complaints, for ſeveral months; nay, if the ſtone be very large, for years. It may likewiſe be proper for the patient, if he be ſeverely pained, not only to begin with the ſoap and lime-water in ſmall quantities, but to take the ſecond or third lime-water inſtead of the firſt. However, after he has been for ſome time accuſtomed to theſe medicines, he may not only take the firſt water; but, if he finds he can eaſily bear it, heighten its diſſolving power ſtill more by pouring it a ſecond time on freſh calcined ſhells *.

The

be had, common quick-lime may be uſed in their ſtead. After the clear liquor has been poured off, the ſame quantity of lime will make a ſecond or third quantity of water of nearly the ſame ſtrength as the firſt.

* A more effectual remedy, at leaſt a palliative, we believe, has lately been diſcovered in the *aerated alkaline water*, now in ſuch univerſal uſe in theſe complaints. We ſay palliative, however; for though in innumerable inſtances it appears to have afforded relief,

yet

The only other medicine which we ſhall mention is the *uva urſi*. It has been greatly extolled of late years both for the gravel and ſtone. It ſeems, however, to be, in all reſpects, inferior to the ſoap and lime-water; but as it is leſs diſagreeable, and has frequently, to my knowledge, relieved gravelly complaints, it deſerves a trial. It is generally taken in powder, from half a dram to a whole dram, two or three times a-day. It may be mixed in a cup of tea or gruel, or taken in any way that is moſt agreeable to the patient *.

OF THE HICCUP.

The hiccup is a ſpaſmodic or convulſive affection of the ſtomach and midriff, ariſing from any cauſe that irritates their nervous fibres.

yet that in general has not been found permanent, when the medicine has been diſcontinued; ſo that to obtain benefit from it, it is neceſſary to continue its uſe, or at leaſt to uſe it occaſionally, perhaps for life. Another remedy propoſed by Dr Beddoes has been found equally effectual, we believe, whilſt it has the advantage of being much more eaſily prepared, and conſequently of being much cheaper. This is the *mineral alkali*, or *ſal ſodæ*, taken from one to two ſcruples daily, either in ſolution, or made into pills with ſoap, after evaporating the water of its cryſtallization. As both theſe medicines are kept in the ſhops, and will be beſt procured thence, we forbear to ſay any thing farther of their preparation. Of the firſt, the aerated alkaline water, viz. about a mutchkin, more or leſs according to circumſtances, may be taken daily.

* With regard to the *uva urſi*, we believe modern practice ſcarcely expects any benefit from it in calculous complaints. In affections of the neck of the bladder and proſtate gland it has ſometimes been uſed with advantage.

It may proceed from exceſs in eating or drinking, from a hurt of the ſtomach, poiſons, inflammations of the ſtomach, inteſtines, bladder, midriff, or the reſt of the *viſcera*. In gangrenes, acute and malignant fevers, a hiccup is often the forerunner of death. I have know an obſtinate hiccup proceed from a ſchirrous tumour of the *pylorus*, or right orifice of the ſtomach.

When the hiccup proceeds from exceſs, eſpecially from aliment that is flatulent, or hard of digeſtion, a draught of generous wine, or a dram of any ſpiritous liquor, will generally remove it. If poiſon be the cauſe, plenty of milk and oil muſt be drank, as has been formerly recommended. When it proceeds from an inflammation of the ſtomach, &c. it is very dangerous. In this caſe the cooling regimen muſt be obſerved. The patient muſt be bled, and take frequently a few drops of the ſweet ſpirits of nitre in a cup of wine-whey. His ſtomach muſt likewiſe be fomented with cloths dipped in warm-water; or bladders filled with warm-milk and water applied to it.

A hiccup proceeding from a gangrene or mortification is generally incurable. In this caſe the Peruvian bark, with other antiſeptic medicines, are moſt likely to ſucceed. If the hiccup be a primary diſeaſe, and proceeds from a foul ſtomach, loaded either with a pituitous or a bilious humour, a gentle vomit and purge, if the patient be able to bear them, will be of ſervice. If it ariſes from flatulencies, the carminatives directed for the heartburn muſt be uſed.

When the hiccup proves very obſtinate, recourſe muſt be had to the moſt powerful aromatic and antiſpaſmodic medicines. The principal of theſe is muſk; fifteen or twenty grains of which may be made into a bolus, and repeated occaſionally. Opiates are likewiſe of ſervice; but they muſt be

uſed

uſed with caution. A bit of ſugar dipped in compound ſpirits of lavender, or the volatile aromatic tincture, may be taken frequently. The Peruvian bark is likewiſe of uſe. External applications are ſometimes alſo beneficial; as the ſtomach-plaſter, or a cataplaſm of the Venice treacle of the Edinburgh or London Diſpenſatory, applied to the ſtomach.

I lately attended a patient who had almoſt a conſtant hiccup for above nine weeks. It was frequently ſtopped by the uſe of muſk, opium, wine, and other cordial and antiſpaſmodic medicines, but always returned. Nothing indeed gave the patient ſo much eaſe as briſk ſmall beer. By drinking freely of this, the hiccup was often kept off for ſeveral days, which was more than could be done by the moſt powerful medicines. He was at length ſeized with a vomiting of blood, which ſoon put an end to his life. Upon opening his body, a large ſchirrous tumour was found near the pylorus, or right orifice of the ſtomach.

CRAMP OF THE STOMACH.

Though this, for the moſt part, is only a ſymptom of nervous or hyſteric diſorders, we thought proper to treat it ſeparately; as it often ſeizes people ſuddenly, is very dangerous, and requires immediate aſſiſtance.

If the patient has any inclination to vomit, he

ought to take ſome draughts of warm water, or weak camomile-tea, to clean his ſtomach. After this, if he has been coſtive, a laxative clyſter muſt be given. He ought then to take ſome doſes of laudanum. The beſt way of adminiſtering it is in a clyſter. Sixty or ſeventy drops of liquid laudanum may be given in a clyſter of warm water. This is much more certain than laudanum given by the mouth, which is often vomited, and in ſome caſes increaſes the pain and ſpaſms in the ſtomach.

If the pain and cramps return with great violence, after the effects of the anodyne clyſter are over, another, with an equal or larger quantity of opium, may be given; and every four or five hours, a bolus with ten or twelve grains of muſk, and half a dram of the Venice treacle. In the mean time, the ſtomach ought to be fomented with cloths dipped in warm water; or bladders filled with warm milk and water, ſhould be conſtantly applied to it. I have often ſeen theſe produce the moſt happy effects. The anodyne balſam may alſo be rubbed into the ſtomach; and an antihyſteric plaſter worn upon it for ſome time after the cramps are removed, to prevent their return.

In very violent and laſting pains of the ſtomach, ſome blood ought to be let, unleſs the weakneſs of the patient make it improper. When the pain or cramps of the ſtomach proceed from a ſuppreſſion of the *menſes*, bleeding is of great uſe. If they be owing to the gout, ſome of the warm cordial-waters, or a large dram of good brandy or rum, will be neceſſary. Bliſtering-plaſters ought likewiſe, in this caſe, to be applied to the ankles.

WANT OF APPETITE.

This may proceed from a foul ſtomach, indigeſtable food, the want of free air and exerciſe, grief, fear, anxiety, or any of the depreſſing paſſions, exceſſive heat, living much upon ſtrong broths, or fat meats, the immoderate uſe of ſtrong liquors, tea, tobacco, opium, &c.

The patient ought, if poſſible, to make choice of an open dry air, to take exercise daily on horſeback, or in a machine, to riſe betimes, and to avoid all intenſe thought. He ſhould uſe a diet of eaſy digeſtion, avoiding every thing that is fat and oily; he ought to chuſe agreeable company, and ſhould avoid intenſe heat and great fatigue.

If want of appetite proceed from errors in diet, or any other part of the patient's regimen, it ought to be changed. If nauſea, and reachings to vomit, ſhew that the ſtomach is loaded with crudities, a vomit will be of ſervice. After this a gentle purge or two of rhubarb, or of any of the bitter purging ſalts, may be taken. The patient ought next to uſe an infuſion in wine of any of the ſtomachic bitters; as Gentian-root, Jeſuits bark, orange-peel, &c. He may alſo eat orange-peel or ginger candied.

Though gentle evacuations be neceſſary, all ſtrong purges and vomits are to be avoided, as they tend to weaken the ſtomach, and hurt digeſtion. After proper evacuations, bitter elixirs and tinctures with aromatics may be uſed. The patient may take, twice a day, a common ſpoonful of the ſtomachic tincture; or, if he be coſtive, the ſame quantity of the bitter tincture of rhubarb. Elixir

of

of vitriol is an excellent medicine in moſt caſes of indigeſtion, weakneſs of the ſtomach, or want of appetite. Twenty or thirty drops of it may be taken twice or thrice a-day in a glaſs of wine or water. It may likewiſe be mixed with the tincture of the bark, two drams of the former to an ounce of the latter, and a tea-ſpoonful of it taken in wine or water, as above.

The chalybeate waters are of great ſervice in this caſe. I never knew theſe fail to ſharpen the appetite, if drunk in moderation. The ſalt water has likewiſe this effect; but it muſt not be uſed too freely. The waters of Harrowgate, Scarſborough, Moffat, and moſt other ſpaws in Britain, may be uſed with the ſame intention. We would adviſe all who are afflicted with indigeſtion and want of appetite, to repair to theſe places of public rendezvous. The very change of air, and the chearful company, will be of ſervice, not to mention the exerciſe, diſſipation, amuſements, &c.

OF DEAFNESS.

Deafness is ſometimes owing to an original fault, or wrong formation of the ear itſelf. It may likewiſe be occaſioned by wounds, ulcers, or any thing that deſtroys the fabric of the ear. It is often the effect of old age, of violent colds in the head, of fevers, of exceſſive noiſe, of hard wax in the ear, of too great moiſture or dryneſs of the ear, &c.

Perſons who are born deaf are ſeldom cured. When

When deafneſs is the effect of wounds or ulcers in the ear, or of old age, it is not eaſily removed. If it proceeds from cold of the head, the patient muſt be careful to keep his head warm, eſpecially in the night; he ſhould likewiſe take a purge or two, and ſhould keep his feet warm, and bathe them frequently in warm water. When deafneſs is the effect of fevers, it generally ceaſes of itſelf, after the patient recovers ſtrength. If it proceeds from dry wax ſticking in the ears, it muſt be ſoftened by dropping oil into them for a few nights at bed-time; afterwards they muſt be ſyringed with warm milk and water, or milk and oil.

If deafneſs proceed from dryneſs of the ears, which may be known by looking into them, half an ounce of the oil of almonds, and the ſame quantity of liquid opodeldoch, or tincture of aſafœtida, may be mixed together, and a few drops of it put into the ear every night at bed-time, ſtopping them afterwards with a little wool or cotton. I have often known this have good effects. When the ears abound with moiſture, it may be drained off by an iſſue or ſeton, which muſt be made as near the parts affected as poſſible.

Many medicines are recommended for the cure of deafneſs, ſome of which, in obſtinate caſes, at leaſt deſerve a trial. Some recommend the gall of an eel mixed with ſpirit of wine to be dropped into the ear; others equal parts of Hungary water and ſpirits of lavender. Etmuler recommends amber and muſk; and Brookes ſays he has often known hardneſs of hearing cured by putting a grain or two of muſk into the ear with cotton-wool. But theſe and other applications muſt be varied according to the cauſe. We cannot conclude this article, without recommending the greateſt attention to *warmth*. From whatever cauſe deafneſs proceeds

ceeds, the patient ought to keep his head warm. I have known more benefit from this alone, in the moſt obſtinate caſes of deafneſs, than from all the medicines I ever ſaw uſed.

OF THE NIGHT-MARE.

In this diſeaſe the patient, in time of ſleep, imagines he feels an uncommon oppreſſion or weight about his breaſt or ſtomach, which he can by no means ſhake off. He groans, and ſometimes cries out, though oftener he attempts to ſpeak in vain. Sometimes he imagines himſelf engaged with an enemy, and, in danger of being killed, attempts to run away, but finds he cannot. Sometimes he fancies himſelf in a houſe that is on fire, or that he is in danger of being drowned in a river. He often thinks he is falling over a precipice, and the dread of being daſhed to pieces ſuddenly awakes him.

This diſorder has been ſuppoſed to proceed from too much blood; from a ſtagnation of blood in the brain, lungs, &c. But its general cauſe is indigeſtion. Perſons of weak nerves, who lead a ſedentary life, and live full, are moſt commonly afflicted with the night-mare. Nothing tends more to produce it than heavy ſuppers, eſpecially if eat late, or the patient go to bed ſoon after. Wind is likewiſe a very frequent cauſe of this diſeaſe; for which reaſon thoſe who are afflicted with it ought to avoid all flatulent food. Deep thought, anxiety, or any thing that oppreſſes the mind, ought alſo to be avoided.

Perſons

Perſons afflicted with the night-mare ought to eat very light ſuppers. They ſhould never go to bed immediately after eating, nor lie upon their back with their head low. As they generally moan, or make ſome noiſe in the fit, they ſhould be waked, or ſpoken to by ſuch as hear them, as the uneaſineſs generally goes off as ſoon as the patient is awake. Dr Whyte ſays he generally found a dram of brandy, taken at bed-time, prevent this diſeaſe. That, however, is a bad cuſtom, and in time loſes its effect. We would rather have the patient depend upon chearfulneſs and exerciſe through the day, a light ſupper taken early, and the uſe of food of eaſy digeſtion, &c. than to accuſtom himſelf to drams. A draught of cold water will often promote digeſtion as much as a glaſs of brandy, and is much ſafer. After a perſon of weak digeſtion, however, has eat flatulent food, a dram may be neceſſary; in this caſe we would recommend it as the moſt proper medicine.

Perſons who are young, and full of blood, if troubled with the night-mare, ought to purge, bleed, and uſe a ſpare diet.

OF SWOONINGS.

The principal cauſes of ſwooning are, ſudden tranſitions from cold to heat; breathing air that is deprived of its proper ſpring or elaſticity; great fatigue; exceſſive weakneſs; loſs of blood; long faſting; fear, grief, and other violent paſſions or affections of the mind.

It

It is well known, that perſons who have been long expoſed to cold often faint or fall into a ſwoon, upon coming into the houſe, eſpecially if they drink hot liquor, or ſit near a large fire. This might eaſily be prevented by people taking care not to go into a warm room immediately after having been expoſed to the cold air, to approach the fire gradually, and not to eat or drink any thing hot, till the body has been gradually brought into a warm temperature.

When any one, in conſequence of neglecting theſe precautions, falls into a ſwoon, he ought immediately to be removed to a cooler apartment, to have ligatures applied above his knees and elbows, and to have his hands and face ſprinkled with vinegar. He ſhould likewiſe be made to ſmell to vinegar, and ſhould have a ſpoonful or two of water, if he can ſwallow, with about a third part of vinegar mixed with it, poured into his mouth. If the fainting-fits prove obſtinate, it will be neceſſary to bleed the patient, and afterwards to give him a clyſter.

As air that is breathed over and over loſes its elaſticity or ſpring, it is no wonder if perſons who reſpire in it often fall into ſwooning or fainting fits *. They are, in this caſe, deprived of the very principle of life. Hence it is that fainting-fits are ſo frequent in all crowded aſſemblies, eſpecially in hot ſeaſons. Such fits, however, muſt be conſidered as a kind of temporary death; and, to the weak and delicate, they ſometimes prove fatal in reality. They ought therefore to be avoided with the utmoſt care. The method of doing this is obvious. Let aſſembly-rooms, and all other places of public reſort, be well ventilated; and let the weak and delicate avoid ſuch places, particularly in warm ſeaſons.

A perſon who faints in ſuch a ſituation ought immediately

* See a former note on this ſubject.

mediately to be carried into the open air; his temples ſhould be rubbed with ſtrong vinegar or brandy, and volatile ſpirits or ſalts held to his noſe. He ſhould be laid upon his back, with his head low, and have a little wine, or ſome other cordial, poured into his mouth, as ſoon as he is able to ſwallow it. If the perſon has been ſubject to hyſteric-fits, caſtor or aſafœtida ſhould be applied to the noſe, or burnt feathers, horn, or leather, &c.

When fainting-fits proceed from mere weakneſs or exhauſtion, which is often the caſe after great fatigue, long faſting, loſs of blood, or the like, the patient muſt be ſupported with generous cordials, as jellies, wines, ſpirituous liquors, &c. Theſe, however, muſt be given at firſt in very ſmall quantities, and increaſed gradually, as the patient is able to bear them. He ought to be allowed to lie quite ſtill and eaſy upon his back, with his head low, and ſhould have freſh air admitted into his chamber. His food ſhould conſiſt of nouriſhing broths, ſago-gruel with wine, new milk, and other things of a light and cordial nature. Theſe things are to be given out of the fit. All that can be done, while the perſon continues in the fit is, to let him ſmell to a bottle of Hungary water, *eau de luce*, or ſpirits of hartſhorn, and to rub his temples with warm brandy, or to lay a compreſs dipped in it to the pit of his ſtomach.

In fainting fits that proceed from fear, grief, or other violent paſſions or affections of the mind, the patient muſt be very cautiouſly managed. He ſhould be ſuffered to remain at reſt, and only made to ſmell to ſome vinegar. After he is come to himſelf, he may drink freely of warm lemonade, or balm tea, with ſome orange or lemon peel in it. It will likewiſe be proper, if the fainting-fits have been long and ſevere, to clean the bowels, by throwing in an emollient clyſter or two.

A FEW

OBSERVATIONS

ON

SOME DISEASES

OMITTED

BY THE AUTHOR, IN THIS EDITION,

AND

LIKEWISE ON SOME OTHERS, INSERTED IN FUTURE EDITIONS.

OF FLATULENCE.

THIS, though a common complaint, yet cannot by any means be conſidered as a primary original diſeaſe; but is always ſymptomatic of ſome more general affection. It is a conſtant attendant on dyſpepſia, or, as it is named in this Work, a want of appetite. Hyſteric and hypochondriac affections are almoſt univerſally accompanied with more or leſs of this ſymptom. To the chapters on theſe diſeaſes, therefore, we muſt refer for more full information on that ſubject, contenting ourſelves with one or two general obſervations on this head at preſent.

Flatulence is univerſally connected with other ſymptoms of the ſtomach and bowels, denoting weakneſs

weakneſs and debility, either local or general. Our attention, therefore, here, ought to be directed to the cure of the general weakneſs and debility, or the particular weakneſs and debility of the ſtomach. The firſt of theſe purpoſes will be beſt accompliſhed by a proper attention to diet and exerciſe; in particular, by a liberal uſe of animal food, and regular exerciſe in the open air, ſea-bathing, &c.; the ſecond of theſe will be beſt obtained by a cautious uſe of ſuch medicines as ſtrengthen theſe parts, as barks, ſteel, vitriolic acid, port wine, &c.

As this ſymptom of flatulence, however, is not conſtantly preſent in the debilitated ſtate of the ſtomach and bowels, but occurs eſpecially on uſing vegetable food; ſo this leads us to obſerve, that vegetable aliment may in general be conſidered as the exciting cauſe of this complaint.

Thoſe who are ſubject to it, therefore, ſhould avoid the uſe of vegetables as much as poſſible, eſpecially ſuch as are known to produce this affection, as cabbages, peaſe, &c.

OF LOW SPIRITS OR VAPOURS.

This alſo is only a ſymptom of ſome other more general affection, as the hyſteric or hypochondriac diſeaſe.

To what has already been ſaid on theſe ſubjects, we ſhall therefore entirely refer our readers for further information.

DISEASES OF THE EYE.

As the eye is the moſt important and moſt complicated organ of all our ſenſes, ſo its diſeaſes are in the ſame proportion the moſt intereſting, and the moſt frequent. I conſider it, therefore, as a defect in the author's plan, that, in the preſent edition, he has entirely omitted this ſubject; more eſpecially too, as many of the ſlighter affections that afterwards terminate in the complete deſtruction of the mechaniſm of this beautiful organ, might, by a very little ſkill and attention at firſt, have been altogether prevented or removed.

Of all theſe, *inflammation* is the moſt frequent, and perhaps, in its conſequences, the moſt important. In this diſeaſe, the eye is affected with pain and heat; and a ſenſation of motes, or ſome foreign body, betwixt the eye-lids and the ball of the eye. There is a diſcharge of tears from the eye, and, on looking into it, we obſerve more or leſs redneſs, or inflammation on the white part, often extending along the membrane that lines the eye-lids. When the affection is conſiderable, light becomes painful to the eye, and the patient has more or leſs of fever.

Inflammation of the eye may be induced by various cauſes, as blows or wounds of the eye; by the ſtimulus of external bodies, as motes, or duſt introduced between the eye-lid and globe of the eye; by ſmoke, or acrid vapours applied to the eye; by the application of too much light, &c. It is frequently induced, in literary people, by too cloſe an application to ſtudy, eſpecially with candle-light; and ſtill more frequently in drunkards, by frequent repeated intoxication.

This

This diſeaſe, by neglect, or improper treatment, frequently terminates in blindneſs: it requires, therefore, our utmoſt attention. When the diſeaſe is violent, and eſpecially if attended with ſymptoms of fever, general bleedings are neceſſary; but local bleeding is in general more ſerviceable. This may be done, either by ſcarifying and cupping on the temples, or by leeches applied round the eye. Dividing the turgid veſſels of the eye with a ſcalpel or lancet, is the moſt effectual method of drawing blood from the part affected. When the violence of the inflammation has been leſſened by any of the means above mentioned, an aſtringent waſh ought to be applied to the eye; and it ought to be defended from the light, by means of a ſhade made of a piece of ſilk. A ſolution of white vitriol, in the proportion of from three to ſix grains, according to circumſtances, to the ounce of water, makes a very good waſh for this purpoſe. The parts to be kept conſtantly moiſt with this, applied on a bit of ſoft rag faſtened to the ſhade.

Speck or Film of the Eye.—This diſeaſe conſiſts in a greater or leſs degree of opacity in the clear part of the eye. It is a common effect of inflammation, when that diſeaſe has either been neglected, or improperly treated; and occurs but too frequently, even under the beſt management. The remedies in this complaint are, eſcharotics or ſtimulants applied to the eye; or the diſeaſed part may be removed at once by the knife. As the application of theſe remedies, however, requires both dexterity and judgement, they are not to be uſed without the aſſiſtance and advice of ſome medical gentleman.

Cataract.—This diſeaſe conſiſts in an opacity,

either of the Lens, or of its coats. It is diſtinguiſhed by obſerving, on looking into the eye, an opaque body ſeated immediately behind the pupil. It can only be removed by an operation, which conſiſts either in depreſſing or extracting this opaque body.

Amauroſis, or *Gutta Serena*.—In this diſeaſe, the appearance of the eye is perfectly natural; there is neither opacity of the cornea, nor of the lens. On examining the eye carefully, however, we perceive the pupil large and dilated; and if we cover the eye, and then expoſe it ſuddenly to a ſtrong light, no contraction of the pupil takes place. This dilatation of the pupil, or want of contraction on expoſure to light, conſtitutes, therefore, the characteriſtic ſymptom of the diſeaſe. This diſeaſe may often be prevented, and ſometimes even cured. What we principally truſt to for theſe purpoſes, is the introduction of a chord into the neck, along with a courſe of mercury properly conducted.

It were eaſy to enumerate here many other diſeaſes of the eye; theſe, however, as they are leſs frequent, and eſpecially as they ſeldom admit of a cure, or even much relief, by ſimple means, we rather chuſe to omit in a popular Work of this nature.

OF

OF SCHIRROUS AND CANCEROUS AFFECTIONS.

These diſeaſes, when once fairly formed, are never cured, and ſeldom even relieved, by means of medicines. Of the inefficacy of all theſe to accompliſh a cure, however much they may have been extolled by thoſe who invented or introduced them, every medical man, of any experience or obſervation, muſt unfortunately be but too much convinced. *Hemlock*, *arſenic*, the *carbonic acid gas*, have only raiſed the public expectation for a time, to make them feel more ſeverely the bitterneſs of diſappointment. In ſuch a ſituation, therefore, to bring forward a long catalogue of medicines, with a great parade of obſervations and directions on the method of uſing them, and a full and particular account of the regimen to be obſerved, &c. were the groſſeſt affectation on the part of the writer of theſe obſervations, and the greateſt inſult on the public. This, however, though the *truth*, is not the *whole truth*. Satisfied as he is of the inefficacy of every medicine hitherto diſcovered for the cure of this diſeaſe, he is no leſs ſo, that a cure may in general be accompliſhed by an operation, if properly performed, and in due time. Such being his firm belief, to impoſe upon any of his readers, in theſe unfortunate circumſtances, with a long liſt of medicines and directions, that could at beſt only ſerve to amuſe them, till the chance of a cure from an operation were either much diminiſhed, or perhaps entirely gone, were at once the higheſt

cruelty and diſhoneſty. All that he ſhall here, therefore, propoſe to himſelf, will be to offer a few obſervations on the means of diſtinguiſhing Schirrus and Cancer from other complaints, that ſuch as labour under them, aware of their danger, may have recourſe to the operation in time; and where unfortunately this has been neglected, to offer a remark or two on the means of alleviating the diſtreſs they conſtantly produce.

Cancer and *Schirrus* are but different names for different ſtates of the ſame diſeaſe. *Schirrus* is a hard, knotty, often painful ſwelling of ſome gland, the ſkin ſtill remaining entire; when this breaks, and the gland ulcerates, it is called a *Cancer*. It is diſtinguiſhed by the following marks. It appears moſt frequently in the breaſts of women. The ſwelling is at firſt commonly ſmall, hard, and moveable; it continues often long almoſt ſtationary, with little addition of ſize, and very little pain; at length, however, it begins to increaſe in ſize, and to get an irregular knotty feel. Severe ſhooting pains are felt darting through it. After continuing in this ſtate for ſome time, more or leſs according to circumſtances, the ſkin, which was hitherto ſound, and moved eaſily on the ſwelling, now becomes red and painful, and cannot be made to ſlide on the parts beneath. If the Schirrus be not now removed, it commonly ſoon degenerates into cancer. The ſkin, where it was inflamed and painful, breaks, the edges retract, become hard and ragged, a thin fœtid diſcharge takes place, and the whole ſurface of the ſore gets a very knotty and irregular appearance.

This train of ſymptoms will in general ſerve ſufficiently to point out this diſeaſe. It only remains, therefore, to be obſerved, that the earlier recourſe is had to the operation, ſo much the greater the probability of a complete cure. When unfortunately

nately it has been allowed to proceed to a ſtate of open cancer, ſtill, however, where all the diſeaſed parts can be ſafely removed, and where the patient is otherwiſe in good health, an operation ought to be adviſed, as the only chance the patient has of eſcaping a moſt painful lingering death.

When the diſeaſe has been allowed to proceed ſo far as to render an operation inadviſeable, all that remains is, to endeavour to palliate the ſymptoms. For this purpoſe, a hemlock-poultice, along with the uſe of the ſame medicine internally, has ſometimes been found uſeful. One of the moſt effectual applications, however, yet diſcovered, I believe, is the *carbonic acid gas*. This remedy, if it do not cure, often retards the progreſs of the ſore, and for a time gives it a healing appearance, and at leaſt ſeldom fails to alleviate the pain. Should it fail in this reſpect, recourſe muſt be had to opiates in ſuch quantities as to produce this effect. This is all that can, in ſuch unfortunate circumſtances, be accompliſhed by medicine.

OF THE VENEREAL DISEASE.

Preliminary Observations.—It is not intended to enter here into any critical diſquiſition on the origin or hiſtory of this complaint, the period at which, or the country where, it firſt made its appearance. Theſe queſtions, though in themſelves

highly curious and intereſting, ſeem not yet to have received any very ſatisfactory anſwer. I do not preſume to have any thing new upon theſe ſubjects to offer; and even if I had, I believe moſt of my readers will agree with me in thinking ſuch diſcuſſions here quite out of place.

Though I would thus avoid, however, to enter on theſe ſubjects, as being quite foreign to my plan, and to the general intention of this Work; yet another queſtion of ſuch importance in a practical view ſtill remains, that I think it neceſſary, before going farther, to offer a few obſervations on it. This is the much-agitated queſtion, Whether gonorrhœa and lues venerea, or a clap and pox, be the ſame diſeaſe? As the determination of this queſtion has an intimate connection with the practice in the former of theſe diſeaſes, and particularly with the propriety of adminiſtering mercury for its cure, I ſhall briefly ſtate the arguments on either ſide, that I may with more confidence come to a concluſion.

It is alleged by thoſe who maintain the two diſeaſes to be the ſame, that gonorrhœa ſometimes produces lues, and that gonorrhœa and chancre mutually produce one another. Theſe aſſertions, as they have been made with confidence, if they were fully proved, would ſettle the matter beyond farther diſpute. This, however, it muſt be obſerved, has not hitherto been done by any ſatisfactory experiments inſtituted for the purpoſe; while the few accidental caſes (for they are allowed to be rare, even by thoſe who ſupport this doctrine) brought forward to eſtabliſh the ſameneſs of the matter in gonorrhœa and chancre, or the termination of the former in lues, admit at leaſt of as eaſy an explanation, upon the oppoſite doctrine, of the two diſeaſes being different.

Gonorrhœa and chancre, it is allowed on all hands,

hands, make their appearance at very uncertain intervals, ſometimes days, for inſtance, ſometimes weeks, from the period of infection. Now, as theſe two diſeaſes often take place in the ſame perſon, and about the ſame time after infection, ſo it ſometimes happens, that the one occurs a conſiderable time *after* the other. This circumſtance, however, of the one's appearing ſome time *later* than the other, is certainly no proof of the one having produced the other; ſince it is well known alſo, that they both frequently appear together, and that either the one or the other may appear at a very different and uncertain period from the time of infection. The ſtrength of this argument, therefore, cannot reſt upon the general principle of the one's being cauſed by the other, becauſe preceded by it in point of time; but muſt depend upon the particular evidence adduced, in each caſe inſtanced in, that only one form of the diſeaſe exiſted at the time in the ſubject whence it was derived. Satisfactory proof of this kind can ſcarcely be expected to occur in the common courſe of practice, and can only be had by experiments made on purpoſe, with ſubjects whoſe veracity we can rely on, and where we are certain no other cauſe of diſeaſe has been applied than what forms the ſubject of the experiment.

The ſame reaſoning that has been uſed with reſpect to gonorrhœa and chancre, applies with equal, and indeed with greater force, to gonorrhœa and lues. The infection in a caſe of chancre may lie concealed for days, or even for a few weeks, before it breaks out; but in lues, the poiſon may remain latent for months, and even years, and at laſt ſhow itſelf in the moſt unequivocal form. So that in this laſt caſe, in addition to the former difficulty of aſcertaining with certainty, whether the patient was expoſed only to one infection at the time, there is

over

over and above ſuperadded, the very great chance of this diſeaſe previouſly exiſting in the ſyſtem, unknown, unſuſpected, even by the patient himſelf, or the ſurgeon.

Having thus ſet aſide the principal arguments adduced on this ſide of the queſtion, as inconcluſive and unſatisfactory, let us now examine the arguments brought forward in ſupport of the other. The chief of theſe are drawn from the different *ſymptoms* of the two diſeaſes, their different *terminations* where they are allowed to proceed, as well as the different method of treatment neceſſary to their *cure*.

1. The ſymptoms are different. *Gonorrhœa* is never, in a natural ſtate, attended with ulceration; *chancre* always is, either at firſt, or very ſoon thereafter: Gonorrhœa is merely an inflammation of the internal membrane of the urethra, with an increaſed diſcharge; a chancre may be ſaid to be a phagedenic or corroding ulcer of the glans or prepuce *.

2. The

* To account for this marked difference in the ſymptoms of the two diſeaſes, the external parts of the human body have been divided into *ſecreting* and *non-ſecreting ſurfaces*. Secreting ſurfaces have been defined to be "all the paſſages for extraneous matter, including alſo the ducts of glands, ſuch as the mouth, noſe, eyes, anus, and urethra;" non-ſecreting ſurfaces, again, have been defined to be "the external ſkin in general." This diſtinction, as it is ſimple and obvious, was certainly founded on actual obſervation. This, however, was too ſimple and too general to anſwer the purpoſes for which it was intended, as it was ſoon diſcovered, that one of theſe ſurfaces, without any aſſignable cauſe, would frequently aſſume properties and actions, which, according to the definition, belonged excluſively to the other. A more comprehenſive diſcovery, however, was fortunately made, about this time, of a ſort of *intermediate ſurface*, which, as it poſſeſſed the characters of neither of the former, (or, in other words, had none of its own), ſo was it at perfect liberty to aſſume either the one or the other, as occaſion might require. One difficulty was thus avoided, at the expence, however, as ſometimes happens, of incurring another. For this third ſurface, though intended only to aſſiſt one or other of the former two, as occaſion might require, ſeemed to render the very exiſtence of both problematical, and any attempt at diſtinction between them nugatory; like a true auxiliary, he ſeemed to threaten both the parties he was called to aſſiſt with utter deſtruction.

2. The *terminations*, too, of the two diſeaſes, when left to themſelves, are very different. Gonorrhœa is in general a mild diſeaſe, and, when not miſmanaged by the patient, ſeldom fails to go off of itſelf, without leaving any bad conſequences behind. Chancre is on all hands allowed to be a moſt obſtinate complaint, that almoſt never goes off without the uſe of medicine; and when it does, for certain leaves a pox behind. This leads to the conſideration of the third difference between theſe two diſeaſes, namely, in the *method of cure*.

3. Gonorrhœa, it was already obſerved, often goes off of itſelf, without the uſe of any medicine, and even in more obſtinate caſes, where ſome medicine becomes requiſite, mercury adminiſtered internally is never found of any uſe; and even in its local application, it is not ſo effectual as ſome other aſtringents or ſtimulants are found to be. Chancre, on the other hand, whilſt it almoſt never goes off ſpontaneouſly, ſo it can be cured ſafely and effectually by a complete courſe of mercury alone.

Thus it appears, that the facts and the reaſoning which would eſtabliſh the identity of the two diſeaſes, are both equally uncertain and fallacious; while the doctrine that maintains them to be different is ſupported by the moſt obvious and unequivocal proofs, the marked difference in the ſymptoms, as well as in the method of cure. Waving, therefore, any farther diſcuſſions on this ſubject, I now proceed to treat of the two diſeaſes ſeparately, beginning with gonorrhœa.

OF

OF GONORRHOEA VIRULENTA.

By the term Gonorrhœa is underſtood a diſcharge of purulent matter from the urethra. When that diſcharge is the conſequence of impure venereal intercourſe, it is called virulent, to diſtinguiſh it from ſimple gonorrhœa, which may proceed from the application of any ſtimulus to the urethra, ſtrong enough to produce inflammation.

This diſcharge occurs in different people, and even in the ſame perſon at different times, at very different periods from the time of expoſure to the infection. We are not able to aſſign any general principle for the more or leſs early appearance of this complaint; nor does its future violence, ſo far as has hitherto been aſcertained, bear any determined proportion to the period of its commencement. Sometimes the diſcharge takes place in the courſe of a few hours from expoſure to infection; more frequently, however, it does not occur for ſome days; and in ſome inſtances, not till ſeveral weeks thereafter.

At ſome uncertain period, then, moſt frequently of three or four days, after being expoſed to infection, the patient begins to feel ſome titillation or itching near the point of his yard, which by degrees proceeds to a ſenſation of pain and heat. His attention being now directed to the part, he commonly obſerves a degree of tenſion and fulneſs about the orifice of the urethra, and the opening of this canal appears contracted, and of a more florid colour. The diſcharge is ſtill, however, trifling; and it is only by carefully preſſing the urethra, and ſqueezing it, as it were, forwards, betwixt the finger and thumb, that

that he at laſt perceives a drop of a whitiſh fluid iſſue from its extremity; and on inſpection, his linen is commonly found a little ſtained. Upon making water, too, the patient now feels a ſmart burning pain at a particular part of the urethra, commonly near its extremity.

Theſe, as they are always the firſt, ſo in ſome caſes they are the only ſymptoms attending this diſeaſe; more frequently, however, theſe, whilſt they increaſe in violence, begin alſo to be accompanied with ſome others. The inflammation extending farther down the urethra, the whole canal often becomes tenſe and painful to the touch; and this affection being gradually communicated to the bladder, brings on a great degree of irritability of that organ. Hence the patient cannot retain his urine for any length of time; and hence too (ſuch is the increaſed action of that organ, or at leaſt its increaſed irritability) almoſt unawares, and before he is ready to receive it, the urine begins to flow, whilſt at the ſame time, from the diminiſhed ſize of the canal from inflammation, it flows only in a ſmall ſtream, or almoſt drop by drop. This irritability, too, of the urinary organs, often extends to the rectum, and the muſcles aſſociated with it, which again produces a conſtant teneſmus or inclination to go to ſtool; and theſe two affections thus acting and re-acting on one another, frequently produce the greateſt miſery and diſtreſs.

In this ſituation, reſt in bed, which ſo often affords relief in other complaints, and to which at firſt eager recourſe is commonly had in this, can ſeldom be freely indulged. No ſooner is the patient warm in bed, and perhaps about to fall aſleep, than he is ſeized with the moſt painful and excruciating chordee. This is an involuntary and painful erection of the penis, and is often ſo ſevere as either

ther to compel him, however reluctantly, to get out of bed, or at leaſt entirely to break his reſt.

Beſide theſe, which are the more ordinary ſymptoms of this complaint, others likewiſe occaſionally make their appearance, frequently indeed from imprudent management on the part of the patient. When the inflammatory ſymptoms have been ſevere, and the patient has uſed much freedom with himſelf in taking exerciſe, eſpecially on horſeback, without the precaution of ſuſpending his teſticles in a truſs, he is often attacked with a violent *inflammation* of the *teſticles*. Sometimes, too, this complaint proceeds from the uſe of too ſtrong an injection; and in ſuch as have had the complaint before, even a mild injection will produce a relapſe.

Swellings of one or more of the *lymphatic glands* in the groin, frequently take place in this diſeaſe. On ſome occaſions, they become conſiderably hard and enlarged, and are productive of ſome inconvenience and uneaſineſs in walking. They ſeem, however, to be merely ſympathetic ſwellings of theſe glands, from the irritation of the acrid matter of gonorrhœa applied to the orifices of the lymphatics, and commonly ſubſide of themſelves without any particular attention.

The diſcharge in gonorrhœa commonly proceeds entirely from the membrane lining the inſide of the urethra. It is not, however, always confined to this alone. In patients who have the prepuce tight, and where of courſe the glans is generally covered, there takes place a conſtant ſecretion from the membrane lining the prepuce, and which is afterwards reflected over the glans, ſimilar to that afforded by the internal membrane of the urethra, of which the former ſeems merely a continuation. In ſuch people, the inflammation, from the greater irritability of the parts, ſometimes extending

tending over the whole outer ſurface of the glans, and the inner ſurface of the prepuce, a *diſcharge* ſimilar in every reſpect to what proceeds from the urethra, *takes place* from the whole of *theſe ſurfaces*, eſpecially about the *baſis* of the *glans*. Sometimes this diſcharge occurs without any previous affection of the urethra, when it is named Gonorrhœa Spuria.

Excoriations very readily occur in this laſt-mentioned ſituation, if the patient be not very careful to keep the parts clean by frequent waſhing. Sometimes a *phimoſis*, at others a *paraphimoſis*, according as the prepuce has been drawn over the glans, or retracted behind it, before the acceſſion of the inflammation is produced by the ſame cauſe.

In women, gonorrhœa is attended with many of the ſymptoms that ſerve to diſtinguiſh this diſeaſe in men. In them, however, it is often a milder diſeaſe, and is frequently with difficulty diſtinguiſhed from another complaint, to which theſe parts are liable, the fluor albus, or whites. Both complaints are attended with a diſcharge of a whitiſh purulent matter from the vagina; and in both caſes this matter is ſometimes ſo acrid as to irritate and inflame the neighbouring parts, and even to produce a ſimilar diſcharge in a perſon of the other ſex who may have had connection with them at the time. Though theſe circumſtances, however, may ſometimes, where the woman chuſes to conceal the real diſeaſe, render this matter doubtful to the medical attendant, yet ſhe herſelf can ſcarcely be miſtaken as to the real nature of her complaint. The fluor albus is a chronic diſeaſe, generally of ſome continuance; at leaſt in its earlier periods, it is ſo evidently connected with the *periodical diſcharge*, (occurring chiefly, either periodically, after each monthly evacuation,

evacuation, or in a more permanent form, after that diſcharge ceaſes), and has ſo few of the ſymptoms that diſtinguiſh gonorrhœa, ſuch as pain and heat in making water, inflammation of the labia, &c. as to leave but little room for any miſtake in ſuch ſituations; while again, in its more advanced ſtages, when it is more apt to be ſevere, and to aſſume ſome of the appearances of the other, the continuance of the diſeaſe, and its gradual progreſs, muſt have ſerved ſufficiently to eſtabliſh a diſtinction. This, at any rate, however, is of the leſs conſequence, as the ſame remedies are equally applicable to both diſeaſes.

OF THE METHOD OF CURE.

On the cure of no other diſeaſe whatever, have a greater diverſity of opinions been entertained by the Faculty of Medicine itſelf, as well as the vulgar, than on that of gonorrhœa. As this diſeaſe, from its ſeat and mode of infection, was for a long while believed to be only a ſymptom of lues, ſo it partook of all the medicines introduced for the cure of that complaint. Mercury, however, which, after various trials with other medicines, was at length found to be a complete ſpecific for the lues, was not found poſſeſſed of ſimilar powers in the cure of gonorrhœa; and thus, whilſt it in a great meaſure ſuperſeded the uſe of other medicines in the cure of the former, it was only uſed in common with them in the cure of the latter diſeaſe: Nay, farther, this diſeaſe, it is now well known, will often, perhaps, if not improperly managed, would always terminate of itſelf; ſo that a variety of new medicines, which, in conſequence of no particular ſpecific having been diſcovered, were conſtantly introduced, eaſily procured the belief

of

of producing a cure, which was only the natural termination of the diſeaſe.

It has juſt been obſerved, that this diſeaſe often terminates of itſelf without any medicines, and that no ſpecific remedy for it has hitherto been diſcovered; it may therefore be alleged, that the uſe of medicines in altogether ſuperfluous This, however, is not the caſe; for though the diſeaſe, when left to itſelf, will go off ſpontaneouſly, yet it is apt to continue long, and, beſide the anxiety and uneaſineſs which this produces, expoſes the patient all the while to other injuries in conſequence of this complaint, ſuch as ſwelled teſticles, phymoſis, paraphymoſis, &c.; and even when it does go off, it not unfrequently leaves a gleet behind; a complaint more difficult of cure than the original one. Nor, though a ſpecific be unknown, are we without ſuch medicines as will produce a cure much ſooner than if the diſeaſe had been left to itſelf. Theſe, therefore, we now proceed to mention.

In treating of the difference between gonorrhœa and lues, it was remarked, among other diſtinctions, that the two diſeaſes required a perfectly different method of cure; that while the latter yielded to mercury only, the former might be always cured without the uſe of that medicine. Of this fact it is of the utmoſt importance for both the ſurgeon and the patient to be well convinced; otherwiſe the one will be diſappointed in his expectation of a ſpeedy cure, while the other will ſuffer the hardſhip of a protracted courſe of mercury, without the ſmalleſt benefit. Even when the ſurgeon is ſatisfied of this himſelf, he finds it often impoſſible to convince his patient, and is ſometimes forced to adminiſter mercury to him, to prevent his taking it privately. The author would therefore beg leave to repeat here, as he thinks attention to this

circumſtance of great conſequence, that in no variety of ſimple gonorrhœa, nor in any of thoſe diſeaſes that are the conſequence of it, is the internal uſe of mercury, either in the ſlighteſt degree uſeful or neceſſary.

This prejudice in favour of the uſe of mercury for the cure of gonorrhœa, being founded on the old and popular opinion of the ſimilarity of the two diſeaſes, long continued, and even yet, in ſome meaſure, ſtill continues to affect the practice in this complaint. As we find ſome late authors on this ſubject pretend, that though mercury be not always neceſſary in the cure of this diſeaſe, yet ſome caſes occur which cannot be cured without the uſe of this medicine. Theſe, however, are allowed, even by the advocates for the ſameneſs of the two diſeaſes, to be ſo rare, that, inſtead of ſerving as general principles to confirm their own doctrine, they rather tend to eſtabliſh the oppoſite, by appearing like exceptions to a general rule. Mercury, however, ſeems to be daily leſs and leſs uſed in this complaint; and it may be hoped, from a more accurate and extenſive information on this ſubject, will ſoon be laid aſide altogether.

Beſide *mercury*, ſeveral other general remedies were in uſe for the cure of this diſeaſe; ſuch as *evacuants*, blood-letting, cathartics, &c.; *detergents*, as they were called, as the balſams and turpentines; *demulcents*, as decoctions of mucilaginous plants, marſh-mallows, &c. The uſe of all theſe was founded upon an erroneous idea of this being a general diſeaſe affecting the whole ſyſtem. This, however, as has been already obſerved, is not the caſe; it is merely a local complaint, and therefore to be treated with local applications. Theſe have accordingly of late been very generally employed, and have in ſome meaſure ſuperſeded the uſe

uſe of other medicines. They are uſed chiefly in a fluid ſtate, or in the form of injections.

Injections may be of very different materials, according to the views of thoſe who adminiſter them, and the different purpoſes they are intended to ſerve. Gonorrhœa is ſometimes attended with violent pain and inflammation all along the urethra, with frequent inclination to make water, as well as great pain and difficulty in the diſcharge. In this ſituation, anodyne and oily injections have been propoſed, to allay the pain, and to defend the parts from the acrimony of the diſcharge. That theſe remedies, in particular caſes, are altogether without their uſe, I am not diſpoſed to aſſert; but think theſe caſes occur ſeldom, and that remedies of a different nature are much more univerſally applicable.

Of all the remedies that have hitherto been tried for the cure of gonorrhœa, none in general anſwer ſo effectually as an *aſtringent injection;* at the ſame time that it is in general perfectly ſafe. The only ſituations where injections cannot be uſed with ſafety, are, where, from the extent or ſeverity of the inflammation, not only a great part of the urinary canal, but even the bladder, or perhaps the teſtes, have been in ſome meaſure affected with pain and inflammation.

When much irritation takes place about the neck of the bladder, with conſtant inclination to make water, and ſome pain and ſwelling in one or perhaps both teſtes; when all or any of theſe ſymptoms occur in any conſiderable degree, aſtringent injections muſt be laid aſide, till, by the application of leeches and a ſaturnine poultice, or one formed of crumb of bread and vinegar, with a plentiful uſe of ſome diluent drink, as water-gruel, whey, &c. and perhaps by the exhibition of an anodyne, with forty drops of laudanum, or (what

may in ſome caſes, when the irritation about the bladder is ſevere, anſwer ſtill better) an anodyne injection thrown up the rectum, compoſed of two or three ounces of water-gruel, and ſeventy or eighty drops of laudanum, the pain and other ſymptoms of inflammation have ſubſided. At the ſame time a little warm olive-oil may be thrown up the urethra with ſafety, often with advantage. Another ſituation ought perhaps alſo to be noticed, where injections ought either not to be uſed at all, or at leaſt with great caution; namely, where the patient, either from particular circumſtances, or from his profeſſion, is obliged to take violent exerciſe, eſpecially on horſeback. In this caſe, it were perhaps better to omit injections, either till he has more leiſure, or till the ſymptoms of inflammation ſubſide; at any rate, they are to be uſed with great caution, neither too ſtrong nor too frequently repeated; and the patient muſt take particular care, by the uſe of a ſuſpenſary, to prevent, as much as poſſible, the accident of a ſwelled teſticle.

A great number of different aſtringents may be uſed in the form of injection for the cure of gonorrhœa. Indeed the principal difficulty ſeems be to be to make a ſelection among ſuch a variety. Different ones may perhaps ſucceed better in different caſes; but there are two or three of almoſt univerſal application; theſe are *ſugar of lead*, *alum*, and *white vitriol*; of which the laſt is perhaps in general the beſt. It may be uſed in the quantity of from two to five grains in the ounce of water. The other two, when it is intended to have recourſe to them, may be uſed nearly in the ſame proportion.

Different conſtitutions differ very much in reſpect of the irritability of the urinary organs, and of

of courſe in reſpect of the ſtrength they will both admit and require injections to be of, to produce a proper effect. As this, however, is only to be learned from trial, care ſhould be taken always to have recourſe to the weaker ones firſt, and to reſort to the ſtronger only when the others have failed. One or other of theſe, of the ſtrength here mentioned, will commonly, if properly employed, anſwer our purpoſe.

Beſide uſing them ſeparately, we may likewiſe combine them in particular caſes. For inſtance, a ſcruple of white vitriol, and half a ſcruple of ſugar of lead, diſſolved in eight or nine ounces of water, make a very proper injection in an incipient gonorrhœa.

Injections compoſed of the beſt materials, and of a ſuitable ſtrength, often fail to produce the effect expected from them, from miſmanagement in their application. This happens chiefly in two ways; firſt, from their not being fairly applied to the diſeaſed part; and, ſecondly, from that application not being often enough repeated. People not accuſtomed to uſe injections frequently think they have thrown them into the urethra, when on a more careful examination it will be found, that they are either ſtill moſtly in the ſyringe, or perhaps have run out at the oppoſite end. This is frequently the fault of the ſyringe, ſometimes of the patient. The piſton of the ſyringe ought to go ſmoothly and eaſily, at the ſame time that it completely fills the barrel; nor ought the point of the ſyringe to be too ſharp, as it would thus more readily injure the urethra, and likewiſe, by its being more apt to be preſſed againſt the ſides of that canal, prevent the eſcape of the injection.

Theſe things being previouſly attended to, the patient ought to take care, in uſing the injection, not to preſs the point of the ſyringe againſt the

ſides of the canal, but by keeping the ſyringe in a ſtraight line with this, to preſerve the point diſengaged; when, on gently puſhing down the piſton, he will be ſenſible of the injection gradually entering and diſtending the urethra. The injection ought now to be retained in this ſituation for a minute or two, before the ſyringe be withdrawn; and when this is done, if the operation has been properly performed, it will be obſerved to run out in conſiderable quantity.

The next thing to be attended to in the uſe of injections is, that they be frequently repeated. This is abſolutely neceſſary to their producing any conſiderable effect. Injections are retained for ſo ſhort a ſpace in the urethra, that this defect from the nature of the application, can only be remedied by a frequent repetition. It were difficult, or perhaps impoſſible, to give here a general rule that might apply to each caſe, as they ought to be uſed oftener or ſeldomer according to the effects produced. When an injection applied in the manner directed occaſions conſiderable pain, it ought not to be repeated ſo ſoon as when it gives either no pain, or very little, on its firſt application. In the firſt caſe it ought not to be repeated till the pain ſubſides; in the laſt, the oftener it is repeated the better.

I have here declined to take notice of two directions that are commonly given on this ſubject, becauſe I think them always unneceſſary, and often troubleſome. What I allude to are, the directions ſo generally given about *warming* the *injection*, and *preventing* its *extending* beyond the *ſeat* of the *diſeaſe*.

The firſt is often inconvenient, and, ſo far from being beneficial, I believe it rather prejudicial, as I think a cold application more likely to abate inflammation than a warm one; and the ſecond, while it is difficult to execute, becauſe it is often impoſſible

impoſſible to ſay exactly to what particular point the diſeaſe extends; and even if we could, not eaſy, when uſing an injection, to prevent ſome of it getting farther. It ſeems farther to be entirely needleſs, becauſe, if it be allowed that a particular point, far down perhaps in the urethra, may be affected with this diſeaſe, while all the reſt of this canal to the extremity, though conſtantly ſoaked in the diſcharge, ſhall remain ſound, it ſeems abſurd to ſuppoſe, that the ſame matter diluted with the injection, and applied only for an inſtant, ſhould produce any bad conſequences.

Nor is it enough to uſe injections merely till the running be ſtopped. Theſe, however well compoſed, or however carefully applied, if given up as ſoon as the diſcharge diſappears, that diſcharge will commonly in a very ſhort time return again. Another very important caution, therefore, remains to be given, namely, that the injections ſhould be continued for at leaſt one week or two after the diſcharge has entirely ceaſed. This precaution is to be diſpenſed with only at the riſk of loſing all the advantage hitherto gained by the uſe of injections. Violent exerciſe of every kind ought alſo to be avoided for ſome time, and all exceſs in drinking, &c.

OF THE TREATMENT OF SOME OCCASIONAL SYMPTOMS OF GONORRHOEA.

Though the remedies juſt now pointed out will in general be all that are requiſite for the cure of gonorrhœa, yet it ſometimes happens that ſome of the accidental ſymptoms of that diſeaſe become ſo violent as to require a particular method of treatment.

Chordee. This has already been defined to be a painful involuntary erection of the penis, attended with a particular curvature of that member, commonly downwards. In a ſlighter degree, it is a common ſymptom of gonorrhœa, and is particularly apt to occur in the night while the patient is warm in bed.

It has been conſidered as in ſome caſes *inflammatory*, and in others *ſpaſmodic*. I believe it to be neither more nor leſs than a violent erection, from the ſame cauſes which produce a natural erection, but having their effects increaſed from the greater irritability of the parts on which they act. The pain, curvature, permanence of this erection, &c. are merely ſymptoms of an increaſed irregular action in theſe parts.

When this ſymptom is moderate, it requires no particular treatment, at leaſt ſcarcely any other than is neceſſary to abate the violence of the general diſeaſe. Living abſtemiouſly, and carefully avoiding any thing heating or irritating in food or drink, as ſpices, ſpirits, &c. taking care to keep the belly open by gentle laxatives; avoiding as much as poſſible all thoſe ſtimuli that are apt to excite natural erections; and eſpecially lying on a hard bed or mattreſs, with few bed-clothes; will in general render this ſymptom ſo mild as to preclude the need of particular applications. Should it, notwithſtanding of theſe precautions, prove violent; plunging the parts in very cold water; the effuſion of cold water on the lower extremities, or the application of a cold ſaturnine ſolution to the part; will often give immediate relief. If the complaint prove obſtinate, recourſe ſhould be had to bloodletting with leeches, an anodyne injection, or the application of a bliſter to the perineum.

Bleeding

Bleeding from the Urethra.—This is not a common ſymptom of gonorrhœa, at leaſt to ſuch an extent as to render any particular management neceſſary. When it occurs only in a ſlight degree, nothing ſhould be done to ſtop it, as it commonly proves very effectual in taking off the inflammation of the urethra; and it is generally in caſes attended with a good deal of inflammation that this ſymptom takes place. If it ſhould prove ſo violent as to endanger either the life or the health of the patient, a little of ſome ſtrong aſtringent injection, as ten or twelve grains of allum, diſſolved in an ounce of water, ſhould be immediately thrown up, as cold as poſſible; at the ſame time that the external parts are immerſed in water, either naturally very cold, or rendered ſo by diſſolving in it ſome of the neutral ſalts, as nitre, &c. Should this fail, preſſure may be applied by introducing a bougie into the urethra; and as this may be increaſed at pleaſure, by preſſure externally with the fingers, we are thus certain of commanding any degree of hæmorrhagy that can take place.

Inflammation of the Bladder.—Slighter affections of this organ, as ſome little pain or irritation about the neck of the bladder, with a frequent deſire to make water, very commonly take place in almoſt every caſe of gonorrhœa. Theſe, however, ſeem to be merely ſympathetic affections, as they commonly ſoon go off without any particular remedy. It is only when the affection is more ſevere and permanent, that it demands particular attention. In this caſe, indeed, it is frequently productive of the greateſt diſtreſs. A ſevere conſtant pain is felt about the neck of the bladder, while, at the ſame time, the patient is haraſſed with an inceſſant deſire to make water, and from the affection extending

extending to the rectum, with a conſtant inclination to go to ſtool. The urine, when diſcharged, is thick and turbid, and on ſtanding, depoſits a copious mucous ſediment.

In this caſe, which ſeems to be an inflammatory affection of the bladder communicated from the urethra, we truſt chiefly to general and topical blood-letting with leeches, to leſſen the inflammation, while we endeavour to take off the irritation of the parts by an anodyne injection, with eighty or ninety drops of laudanum. As this complaint ſeems often to proceed from the diſcharge in gonorrhœa being imprudently ſtopped, by uſing too ſtrong an injection, or perhaps, while uſing a very proper injection, taking too much exerciſe, eſpecially on horſeback, or drinking too freely, we endeavour to bring back the running to the urethra, by throwing up occaſionally ſome warm oily injection into the urethra. With a view to dilute the fluids, and to take off the acrimony of the urine, we at the ſame time recommend a plentiful uſe of ſome mucilaginous drink, as a gum-arabic emulſion, water-gruel, &c.

Swelling of the Teſticles.—This affection, like the laſt, is frequently occaſioned by imprudent conduct during gonorrhœa. Sometimes it is the effect of too ſtrong an injection; more frequently, however, it proceeds from uſing too much exerciſe without a ſuſpenſary. In ſuch as have once had this complaint, the moſt trifling cauſe will produce a relapſe. It is merely an inflammation of the teſticle communicated from the urethra along the vas deferens, and is therefore to be treated like other local inflammations.

We truſt chiefly in this caſe to blood-letting with leeches, which ought to be repeated if neceſſary. If, as ſometimes happens, it be attended with

with conſiderable fever, as heat, thirſt, &c. then it will be proper alſo to take away a quantity of blood from the arm, proportioned to the violence of the diſeaſe, and the habit of the patient. The moſt perfect reſt is abſolutely neceſſary in this complaint. Indeed the moment it appears, the patient ought to be laid upon his back, from which he is to be moved only when abſolutely neceſſary, and then having his teſticles carefully ſuſpended in a truſs.

After the parts have been well leeched, a cold ſaturnine ſolution ſhould be kept conſtantly applied to them; and any irritation that might be communicated by hardened fœces collected in the rectum, ſhould be prevented by the occaſional uſe, either of ſome mild laxative, as a table-ſpoonful of caſtor-oil, or of an emollient glyſter. If the diſcharge from the urethra has been ſuſpended, warm fomentations may be applied externally, or an injection of warm olive-oil may be thrown up, with a view to its reſtoration.

OF THE TREATMENT OF THE CONSTITUTION IN GONORRHOEA.

In the ordinary courſe of gonorrhœa, the management of the general health requires but little attention; all that is commonly requiſite, in moſt caſes, being to avoid as much poſſible exerciſe of every kind, as riding or walking; to live rather abſtemiouſly in reſpect of animal food, and eſpecially in the uſe of drink; avoiding every thing heating, as ſpices, ſpirits, wine, or even ſtrong ale or porter; taking care to keep the bowels open by the uſe of ſome gentle laxatives, as cream of tartar, or caſtor-oil, if neceſſary; and uſing plenty of ſome weak diluent drink, as water-gruel with lemon-juice,

juice, or cream of tartar. The uſe of a ſuſpenſary bandage, at leaſt by ſuch as have occaſion to go about, or have the diſeaſe conſiderably ſevere, is an eaſy, at the ſame time that it is a uſeful precaution. Theſe attentions will in general be all that are neceſſary in moſt caſes of gonorrhœa.

Sometimes, however, the ſymptoms of gonorrhœa are from the firſt uncommonly ſevere, probably depending upon peculiarity of conſtitution; at other times, though ſufficiently mild at firſt, they are afterwards rendered ſevere by miſmanagement or imprudence. In either caſe, when the general health becomes affected, it requires attention, as this again tends to excite and increaſe the local affection. When fever, therefore, to any conſiderable degree, as indicated by the quickneſs or hardneſs of the pulſe, heat, thirſt, &c. takes place, a quantity of blood ſhould be taken from the arm, in proportion to the violence of the ſymptoms. The diet ought to be more ſpare than is otherwiſe neceſſary in this diſeaſe, and ſhould conſiſt of vegetables, or weak broths, with a plentiful uſe of ripe fruits, and of cooling diluent drinks, as before recommended. The moſt perfect reſt in this caſe is neceſſary.

OF THE CURE OF GONORRHOEA IN WOMEN.

This diſeaſe, we have already had occaſion to remark, is in general milder in women than in men. In women the part principally affected, the vagina, being ſimpler in its ſtructure as well as functions, and of courſe leſs irritable than the urethra, the common ſeat of the diſeaſe in men, is not ſo liable to be affected with violent inflammation. Hence this diſeaſe in women, where the vagina only is affected, is often ſo mild as ſcarcely

to

to be noticed, even by the patient herſelf. Where the urethra, however, is the ſeat of this diſeaſe, the ſymptoms of pain, inflammation, and heat in making water, are nearly the ſame as in the other ſex.

As the ſymptoms of this diſeaſe in women are nearly the ſame as in men, the *indications* of *cure* here are likewiſe ſimilar. To anſwer theſe purpoſes, we truſt entirely to local applications, and particularly to the uſe of aſtringent injections. Theſe are to be prepared and uſed nearly in the ſame way as recommended for the other ſex. When the vagina alone is the ſeat of this diſeaſe, as this part is not poſſeſſed of much irritability, the injections to be uſed may be ſtronger than when they are intended to be thrown into the urethra, either in men or women. In this caſe, therefore, the injections to be uſed may be rendered ſtronger, by adding a grain or two more of the allum, ſugar of lead, or white vitriol, (which ever we employ, though this laſt is perhaps the beſt here alſo), to each ounce of the water. When the diſeaſe is in the urethra, an injection cannot be uſed by the patient herſelf; and, at any rate, would, from the ſhortneſs of the urethra, be attended with great danger of injuring the bladder.

OF OTHER DISEASES INDUCED BY GONORRHOEA.

Gonorrhoea, when moderate, ſometimes, as was remarked, goes off ſpontaneouſly, but more commonly when cured by the uſe of aſtringent applications, without leaving any troubleſome ſymptoms behind. But this, though frequently, is not always the caſe. Even under the mildeſt form, and the moſt careful management, it will ſometimes be ſucceeded by complaints more troubleſome

ſome and obſtinate than the original diſeaſe. This takes place more frequently where the diſeaſe has been originally violent, and where nothing has been done to moderate the ſymptoms, or where, though mild at firſt, it has been rendered ſevere by improper management. Of theſe affections I ſhall now proceed to conſider ſome of the moſt frequent, as well as the moſt troubleſome.

Gleet.—By this term is underſtood the continuance of a mucous diſcharge from the urethra, after the pain and other ſymptoms of gonorrhœa have ſubſided. This complaint is diſtinguiſhed from gonorrhœa by the appearance of the diſcharge, as it is commonly thick and of a whitiſh colour; by the abſence of pain and inflammation; and by its being incapable of communicating infection. Though gleet occaſionally ſucceeds every variety of gonorrhœa, yet more generally it is a ſequel of ſuch as have been attended with more violent ſymptoms, or whoſe cure has been protracted by negligence or improper management.

Gleets may with propriety be divided into two kinds; ſuch as proceed merely from *debility* or *relaxation* of the *veſſels* of the *urethra*, and ſuch as are *complicated* with other *affections* of that canal, as *obſtructions* from ſtrictures, caruncles, or a ſwelled proſtate. This diſtinction is of the utmoſt importance, as by it we are to be directed in our future method of treatment; for what would prove a cure in one variety of the complaint, would be of no benefit in another, or perhaps tend to aggravate the diſeaſe.

In the firſt or *ſimple gleet*, no other ſymptom occurs but merely the diſcharge of a ropy matter. The urine continues to flow in as full a ſtream as uſual. There is neither a more frequent inclination than uſual to make water, nor is the diſcharge

diſcharge attended with any pain. This is not the caſe in the other ſpecies of gleet, where it is accompanied with ſome *obſtruction* of the urethra.

In this ſituation the ſtream of urine is always more or leſs diminiſhed, and not unfrequently divided, as it were, into two; and in proportion as the complaint continues, the urine ſtill flows in a ſmaller ſtream. In making water, ſome pain too is commonly felt at a particular part of the urethra, and ſometimes a degree of ſwelling or fulneſs may be felt externally at this particular point.

But this *obſtruction* may proceed from different cauſes; therefore, the moſt effectual way to aſcertain its nature, as well as ſituation, is by the introduction of a bougie. If it depend on a ſtricture or a caruncle, examination with a bougie will commonly point out this with ſufficient certainty. But ſometimes, though neither ſtricture nor caruncle take place, a bougie cannot be introduced from a kind of ſpaſmodic contraction of this canal. This, however, may be diſtinguiſhed from the former, by its being only temporary, or one day ſevere, and another quite eaſy; whereas ſtricture or caruncle produces not only a more permanent obſtruction, but one which is gradually becoming worſe.

Beſide thoſe cauſes of obſtruction juſt now enumerated, a *diſeaſed proſtate gland*, as already noticed, may produce this diſeaſe. This affection of the proſtate gland is always accompanied with a conſiderable degree of pain and irritation about the neck of the bladder, and a frequent deſire to make water. Like the other obſtructions, it preſents an impediment to the introduction of a bougie. In this caſe, however, the obſtruction is ſeated lower down, being at the very neck of the

the bladder; and it may commonly be distinctly felt by introducing the fore-finger into the anus.

Of the cure of simple Gleet.—The distinctions just now pointed out, will, in general, serve to distinguish a simple gleet from one complicated with other diseases of the urethra. It now remains to treat of the method of cure. And, first, of a simple gleet. The remedies employed for the cure of this disease may be divided into two kinds, general and topical. As this disease is supposed often to proceed from general debility, or at least to be commonly connected with it, with a view to correct or remove this, it is customary to prescribe strengthening remedies, such as bark, steel, the cold bath, &c. But these remedies, though they may with propriety be joined with local applications, such as astringents and stimulants, as coinciding with the general intention of cure here, which is to strengthen or stimulate, yet ought not to be trusted to for producing a cure of themselves.

The disease is in general merely local, and therefore to be combated most successfully by local applications, or such general remedies as at the same time act locally. The *cold bath* may be considered as of this kind, which, acting both locally and generally at the same time, has often produced a cure when other remedies had failed. Analogous to this, too, seems to be the effect of some of the turpentines or balsams, as pure *Turpentine*, *Copaiba Balsam*, &c. which given internally to the extent of thirty or forty drops, twice a-day, produce a considerable local effect on the urinary organs, and thus have been of service as local stimulants in this disease.

The safest, however, as well as in general the most effectual remedies in this case, are the local applications, as *injections* or *bougies*. *Injections* are considered

conſidered as of two kinds, *aſtringent* and *ſtimulant*. I am inclined to think, however, that the action of both is the ſame, or ſtimulant; and that they do not differ eſſentially from one another in the *mode* of action, but only in the *degree*. I conſider an aſtringent as a weak ſtimulant, and a weak ſtimulant as an aſtringent.

However we may reaſon with regard to their mode of action, the remedies to be employed are the ſame: Firſt, The weaker ſtimulants, or, as they have been called, aſtringents. Of theſe the injections, mentioned before for the cure of gonorrhœa, are in this caſe alſo, in general, the moſt ſucceſsful. As there are no ſymptoms of pain or inflammation here, however, as in the former caſe, ſome more freedom may be uſed in reſpect of their ſtrength. This ought to be done gradually, beginning with them of the ſame ſtrength at firſt, and adding a grain or a grain and a half of the white vitriol or the alum, whichever we employ, to each ounce of the injection, till they either remove the complaint, or produce ſo much pain and irritation, as to render any further increaſe, or even their repetition of the ſame ſtrength, improper. In this caſe, or wherever any conſiderable pain or inflammation has been produced by an injection, it ought not to be repeated till that ſhall have moſtly ſubſided.

Should theſe, after a careful trial for ſome time, and as ſtrong as we dare venture to uſe them, fail to produce the effect, we muſt then have recourſe to the ſtronger or more ſtimulant injections. Of theſe, as well as of the former, a variety might be enumerated here. But as they probably act all on the ſame principle, or by producing a certain degree of irritation, and as this effect may probably be produced by uſing any of them of a certain ſtrength, there ſeems but little reaſon why we ſhould either have recourſe to variety here, or even

be very anxious about a ſelection. The corroſive ſublimate of mercury affords as ſimple and manageable, and, from what has been ſaid, perhaps as effectual a material, for an injection of this ſort, as any of the reſt, ſuch as the volatile alkali, verdigriſe, &c. It may be uſed from a grain or a grain and a half, to the extent of three or four grains, diſſolved in eight ounces of water, taking care to begin with the weaker, and to proceed to the ſtronger only gradually as there may be occaſion.

Beſide injections, bougies were likewiſe mentioned as local applications for gleet. Theſe, on being introduced into the urethra, act mechanically on the part, and by producing a degree of irritation and inflammation there, anſwer the ſame purpoſe as irritating injections. They are, however, of more difficult and dangerous management, and ought not to be uſed but under the eye or direction of ſome medical gentleman. Nor do I believe them to be at all neceſſary in this ſimple ſtate of gonorrhœa I am now treating of; as I am perſuaded, that all the advantages to be obtained from the uſe of bougies, may, in this caſe, be derived with as much certainty and more ſafety, from a proper management of injections.

OF THE CURE OF COMPLICATED GLEET.

Gleet, as has already been remarked, is frequently connected with other affections of the urethra, as obſtructions from *ſtricture* or *caruncles*, obſtructions from *ſpaſm*, or from *diſeaſed proſtate*. The means of diſtinguiſhing theſe having been already pointed out, it is here intended to offer a few obſervations

ſervations on their treatment. And, firſt, of obſtructions from ſtricture or caruncles.

Caruncles were long ſuppoſed to be a common cauſe of obſtruction in the urethra. This idea probably originated from obſerving excreſcences, or, as they were called, caruncles, frequently ſeated on the external parts of the urinary organs, as the glans, prepuce, labia pudendi. Though the external parts juſt mentioned, however, are frequently attacked with theſe caruncles, yet later and more accurate obſervations have diſcovered, that the internal part of the urethra is very ſeldom liable to ſimilar affections. Indeed their occurrence here is ſo rare, and their method of treatment ſo perfectly ſimilar to that for ſtrictures, that they do not require, in a practical view, to be noticed ſeparately. I ſhall therefore paſs on to thē cure of ſtrictures, the obſervations to be made on this head applying with equal force to the cure of caruncles.

Strictures, as has already been remarked, are the moſt frequent cauſe of obſtructions in the urethra. The moſt common ſeat of theſe is either about two or three inches, from the extremity, or low down in the perinæum, about the bulb of the urethra. The canal being naturally narrower about theſe two places, ſtricture is more readily induced; and where this occurs in one of theſe ſituations, it often takes places in the other at the ſame time. The complaint comes on ſo gradully, that it frequently takes place to a conſiderable degree, before it be perceived by the patient. The ſurgeon is often the firſt to diſcover it himſelf, on trying to introduce a bougie for the cure of an obſtinate gleet, that had reſiſted every other remedy.

As in this caſe the diſcharge from the urethra, or the *gleet*, is only a ſymptom of the ſtricture, our principal attention here is directed to the cure of the ſtricture. For this purpoſe, different remedies have at different times been propoſed; but the two in moſt general uſe at preſent, are the *bougie* and *cauſtic*.

Bougies of ſome kind or other, at leaſt ſomething that acted on a ſimilar principle, as wax candles or pieces of lead, have been long known, and occaſionally uſed in caſes of ſtricture. But Daran, by improving their compoſition, was the firſt who brought them into more general uſe.

Though the introduction of a bougie, conſidered ſimply by itſelf, or in a ſound ſtate of the urethra, is perhaps ſcarcely a more difficult operation than throwing an injection up the ſame canal; yet the ſymptoms for which it is uſed are commonly ſo diſtreſſing, and ſo alarming, and the averſion that moſt people have to the introduction of any thing into the urethra, is ſuch, that it probably never will come into uſe but under the direction and eye, if not under the immediate hand of a ſurgeon. Indeed the greateſt judgement and experience is frequently requiſite to conduct this remedy with caution and ſucceſs; and its firſt introduction often requires no leſs dexterity and addreſs. In the firſt ſtage of the buſineſs, therefore, the advice and aſſiſtance of a ſurgeon is abſolutely neceſſary. But as the after management of it is often left to the patient himſelf, I ſhall offer a few remarks on the uſe of bougies.

In uſing bougies, the *degree of force* that may ſafely be employed, can be learned from experience alone; only it may be remarked in general, that in the ſituation we are are now ſpeaking of, (where a ſmall-ſized bougie is ſuppoſed to have already paſſed), it can never be proper to uſe ſo much

much force as to give conſiderable pain; as this, in a great meaſure, defeats the intention of its introduction. It is therefore better, as well as ſafer, to uſe a ſmaller bougie, and to repeat this frequently, than, by uſing one that is too large, to give ſo much pain as to prevent its being introduced again for a conſiderable time.

The *length of time* that a bougie ought to remain in, cannot be determined beforehand, but muſt be regulated in a great meaſure by the feelings of the patient. So long as it occaſions no uneaſineſs, it may be ſafely allowed to continue; but it ſhould not be ſuffered to remain long after it produces conſiderable pain, becauſe this would neceſſarily prevent its introduction again for ſome time.

The ſame kind of reaſoning that has been uſed as to the *length of time* a bougie ought to continue, may be applied to the *frequency* of its *introduction*. Where its introduction gives no uneaſineſs, this ought be repeated as often as the patient's opportunities will allow; where it gives conſiderable pain, the introduction muſt not be ſo frequent; and it ſhould rather, if poſſible, be continued longer at a time.

The laſt thing to be attended to in the uſe of bougies is, that they be uſed gradually larger, in proportion as the ſtricture will admit. This ought to be continued till the ſtricture be diſtended, if poſſible, to the ſize of the reſt of the canal. Even after the ſtricture ſeems to be entirely removed, bougies ought ſtill to be continued for ſome time longer, to prevent, as much as poſſible, that diſpoſition of the parts to contract.

Theſe directions, however, apply only to thoſe caſes where bougies of a certain ſize can be paſſed. But unfortunately the ſtricture is ſometimes ſo complete, as not to admit a bougie even of the

ſmalleſt ſize. In this diſtreſſing ſituation, the late ingenious Mr Hunter invented an inſtrument for applying *cauſtic* to the part. This invention has been ſo far improven and extended ſince, as to render the application of the cauſtic preferable to the bougie, even in many of thoſe caſes that admit of a bougie. This, however, is always a nice operation, and therefore only to be attempted by an expert ſurgeon. For further information on this head, ſee a late publication by Everard Home.

Spaſmodic Strictures of the Urethra. Theſe are diſtinguiſhed from the permanent ſtrictures treated of in the laſt ſection, by their coming on ſuddenly, and diſappearing again in the ſame manner; while the permanent ſtricture is more conſtant in its effects, and is generally growing worſe. The two affections, however, are uſually in ſome meaſure conjoined, as the permanent ſtricture is commonly attended with ſome degree of ſpaſmodic affection. When the ſtricture is purely ſpaſmodic, the warm bath, warm fomentations to the part, the application of a bliſter to the perinæum, with an opiate internally, or an anodyne injection with eighty or a hundred drops of laudanum, will generally give relief. When this complaint is connected with permanent ſtricture, the cure will be obtained by removing the latter. In this ſituation the application of the cauſtic ſeems preferable to every other remedy.

Diſeaſed proſtate Gland. This, as has already been remarked, is another cauſe of obſtruction in the urethra. It is diſtinguiſhed by the ſymptoms of pain and irritation about the neck of the bladder, a frequent deſire to make water, often accompanied with a degree of teneſmus, or inclination

nation to go to ſtool: and, on introducing the finger into the anus, the proſtate gland is felt conſiderably enlarged. In this ſituation, leeches, and afterwards a bliſter, ſhould be applied to the part; and if the patient be ſtout and of a full habit, or the diſeaſe accompanied with fever, blood may likewiſe be taken freely from the arm. Where the complaint has immediately ſucceeded a ſuppreſſed gonorrhœa, warm fomentations may be uſed to the penis, or a little warm oil may be thrown up the urethra, with a view to bring back the diſcharge. To relieve pain and irritation, opiates, eſpecially in the form of injection, are particularly uſeful here. A dram of laudanum, mixed with two or three ounces of thick water-gruel, or ſtarch, may be uſed for this purpoſe.

OF THE GONORRHOEA SPURIA.

The diſcharge in Gonorrhœa for the moſt part proceeds entirely from the urethra. Sometimes, however, this diſcharge from the urethra is accompanied with a ſimilar diſcharge from the internal ſurface of the prepuce, and the external ſurface of the glans. At other times, this diſcharge from the glans and prepuce takes place without any affection of the urethra, when it has obtained the name of Gonorrhœa Spuria.

As this complaint differs from true gonorrhœa, not in the nature, but only in the ſeat of the diſeaſe, the remedies before recommended for the cure of gonorrhœa, prove equally ſerviceable here.' After uncovering the glans, the parts affected are to be frequently bathed in a ſolution of lead or white vitriol; ſuch as was already recommended for injecting into the urethra. A ſolution of cor-

roſive ſublimate, of about half a grain to the ounce of water, proves a very effectual remedy in ſuch a ſituation.

To prevent *excoriations*, which very readily occur here, if the parts be not kept clean, the prepuce ought frequently to be drawn back, and any matter that may adhere to the parts carefully waſhed off. The prepuce is commonly tight in thoſe who are ſubject to this diſeaſe; and if it be not drawn back frequently, and the parts kept clean and eaſy, it is apt to thicken and contract ſo much from inflammation, as to produce a phymoſis, a diſeaſe that will be noticed hereafter. To prevent which, it will be farther requiſite, after drawing back the prepuce, to introduce a bit of lint covered with a little ſaturnine ointment betwixt the prepuce and the glans.

OF WARTS.

Warts, or little cutaneous excreſcences, are another common conſequence of gonorrhœa. They occur chiefly in thoſe who have the glans covered with the prepuce, and where the matter of gonorrhœa, if not carefully prevented, is apt to lodge betwixt them. They may originate in any part of the glans or prepuce, but, for the reaſon juſt mentioned, they occur moſt frequently about the baſis of the glans, or where it is connected with the prepuce.

They ſeem to be produced by the parts being long ſtimulated, and conſequently relaxed by the acrid matter of gonorrhœa. Whatever, therefore, tends to prevent this application, will in the ſame proporton prevent their growth. Thus, where the parts are kept accurately clean by frequent waſhing,

waſhing, and by the introduction of a bit of lint betwixt the glans and prepuce, to abſorb the matter, warts will ſeldom take place. With the ſame intention, too, of preventing their formation, the parts ſhould now and then be bathed with a ſolution of ſugar of lead or white vitriol, or of corroſive ſublimate, ſuch as has already been recommended for the cure of gonorrhœa or gleet.

When they have already acquired a conſiderable bulk before any attention has been paid to them, which happens often enough from their giving no uneaſineſs but by their ſize, ſome eſcharotic application becomes neceſſary to deſtroy them. For this purpoſe, they may either be touched frequently with a bit of crude ſal ammoniac, or a little blue vitriol. Where they are not large, touching them now and then with the lunar cauſtic, will anſwer more effectually as well as ſpeedily. A little of the powder of Savine, ſprinkled on the wart, is a very effectual application. As it readily induces conſiderable inflammation, it muſt be uſed with caution, however, and ſhould be confined to the part by covering it with a little lint.

OF THE LUES VENEREA.

This diſeaſe puts on a variety of appearances, according as it is *local* or *conſtitutional*, according to the *difference* of the *parts affected*, and likewiſe according to *diverſity of conſtitution*. The venereal

real poiſon, like the inoculated ſmall-pox, commonly produces ſome local affection, as inflammation, ſuppuration, or ulceration, before it contaminates the conſtitution; like the ſame diſeaſe, however, communicated in the natural way, it ſometimes ſhews its effects on the conſtitution, without any previous ſymptoms of local diſeaſe. Whether the conſtitution be primarily affected, however, or whether it ſuffer only from previous local diſeaſe, ſtill, as the ſymptoms, and eſpecially the method of treatment, are ſomewhat different, I ſhall conſider the two apart, beginning with the *local*, and then proceeding to the *conſtitutional form of the diſeaſe*. I ſhall afterwards conſider theſe, in ſo far as they ſeem to be affected, either by a *difference* of the *parts* on which they are ſeated, or by a *diverſity* of *conſtitution*; or, in other words, the *accidental varieties* of this diſeaſe.

OF THE LOCAL SYMPTOMS OF THE LUES VENEREA.

This diſeaſe is commonly communicated by the intercourſe which takes place between the two ſexes in the act of venery. It therefore neceſſarily appears in a local form, chiefly on the private parts, or in their neighbourhood. In theſe its firſt appearance is generally on the prepuce or glans, ſometimes on different parts of the penis or teſticles, or even on the parts contiguous to theſe, in the form of what is called a *chancre*. Sometimes, though rarely, the firſt appearance of this diſeaſe is in the form of what is called a *Bubo*; which in men is commonly ſeated in the groin.

Chancre. The common ſeat of this diſeaſe, as has been already obſerved, is the prepuce or glans, particularly in the angle between them, or on the frenum,

frenum, which unites the two together. Its firſt appearance is commonly that of a ſmall watery veſicle, which, after continuing for a day or two with little or no pain, but with ſome degree of heat or itching, at laſt burſts, producing a ſmall ulceration, with a foul whitiſh-coloured baſe, and ragged edges.

Though a chancre in men generally appears upon the parts juſt mentioned, it is by no means confined to theſe alone. It appears occaſionally on different parts of the penis and ſcrotum, and about the pubes, in the form of a little bile or pimple. This by degrees ſuppurates and breaks, and from the thinner parts being gradually evaporated, is formed into a cruſt or ſcab. When this falls off, or is removed, the parts beneath appear foul and ulcerated.

Chancres appear at very uncertain intervals from the period of infection. In ſome caſes they have been obſerved as early as twenty-four hours after infection, while in others ſix or ſeven weeks have elapſed before they were perceived. They ſeem indeed to appear earlier on ſome parts, as the prepuce and frenum, than on others, as the glans, or other parts of the penis or ſcrotum covered with the common ſkin. And we often ſee new ones breaking out on the glans, when thoſe on the prepuce or frenum had been for ſome time under cure. Some deception, however, it is obvious, may eaſily take place here; as the matter of ſores on the frenum or prepuce can ſcarcely fail to be applied to the glans, when the prepuce is drawn over it; ſo that the ſore on the glans may be only a ſecondary one from the primary affection of the prepuce. Of this I have been ſatisfied in different inſtances, from obſerving the ſore that afterwards took place on the glans, exactly oppoſite to a former one on the prepuce. But the moſt frequent

period

period of their appearance is, from two to ſix days after infection.

It is always of importance, either to a ſurgeon or patient, to aſcertain as ſoon as poſſible the nature of any affection of theſe parts; to the firſt, that he may be able to act with confidence and deciſion; to the latter, that he may make the proper application in due time. From the appearance of the ſore, connected with the hiſtory of the caſe, a ſurgeon of experience will not in general be long in ſuſpence as to its nature. The appearance of the ſore, however, is not always of itſelf ſufficient to determine this; and ſometimes the hiſtory of the caſe affords no additional light. Beſide pimples and excoriations, which theſe, as well as other parts of the body, are liable to at any time, they not unfrequently ſuffer from mechanical injury during coition. Thus people who have the frenum ſhort, or the prepuce tight, often ſuffer during coition ſlight lacerations of theſe parts. When theſe occur after a ſuſpicious connection, they often give riſe to great anxiety and doubt. No deciſive opinion can be formed merely from inſpecting the parts, which have the appearance of little ſores, with conſiderable pain and inflammation; and the hiſtory of the caſe, from their having been obſerved ſoon after a ſuſpicious connection, leads to the concluſion that they are really venereal.

Having repeatedly been conſulted in caſes of this kind, where the patient himſelf was ſatisfied he had got chancres, and was with difficulty prevented from entering immediately on a courſe of mercury, but ſoon got well, merely by keeping the parts clean, and applying to them a little of ſome ſoftening ointment, I ſhall mention ſuch circumſtances as tend chiefly to diſtinguiſh the two complaints. Sores ariſing from laceration of the

parts

parts appear immediately after the accident; they have a more irregular or leſs defined appearance, (having neither the ulceration nor the margin ſo diſtinctly marked), are not ſo foul, or whitiſh coloured, and are attended with more pain and inflammation than chancres of the ſame ſtanding. Upon inquiry at the patient, too, it will commonly be found, that he was ſenſible of conſiderable pain at the time, and perhaps perceived ſome blood upon his linen ſoon after the accident; and that he has been ſubject to ſimilar accidents on former occaſions. Even the ſituation of the ſores will ſometimes aſſiſt us in forming an opinion; as they more readily occur on the anterior and fore part of the prepuce or frenum, whereas chancres generally take place at the baſe. Where the caſe, from any or ſeveral of the circumſtances juſt mentioned, appears doubtful, it is proper to delay the exhibition of mercury for a day or two, and to watch the appearance of the ſores, keeping them clean, and applying a little cerate to them. Should they heal kindly and readily, we are ſatisfied of their being harmleſs; if, on the contrary, they become foul, and begin to ſpread, we are ſatisfied of their being venereal.

In women, chancres have much the ſame appearance as in men. They are ſeated chiefly on the inſide of the labia, the nymphæ, clitoris, &c. Sometimes, however, they make their appearance on the outſide of the labia, on the perinæum, and about the anus. In this ſituation, they reſemble the chancres that take place in men on the penis, ſcrotum, and about the pubis.

OF THE CURE OF CHANCRE.

General obſervations on the *cure* of *local venereal complaints*. Venereal ſores may be divided into two kinds, *general* and *local*; the firſt are effects produced from a general contamination of the ſyſtem, the ſecond are merely the reſult of the application of venereal matter to a particular part, neither depending on, nor neceſſarily connected with, a conſtitutional diſeaſe. The firſt, therefore, are merely *ſymptomatic*, the laſt *primary*.

According to this diſtinction, which is founded on the nature of the two diſeaſes, the *indications* of *cure* in the two complaints ought to be different. In the firſt, our principal attention is directed to the cure of the conſtitution; in the ſecond, to the cure of the local diſeaſe: while the cure of the local complaint in the firſt, and the ſafety of the conſtitution in the ſecond, are, as it were, ſecondary objects of attention.

Chancre is always at firſt what we have denominated a local complaint. It is merely the venereal poiſon depoſited on the ſurface, which, after producing inflammation and ſuppuration there, thence proceeds to contaminate the ſyſtem. It is even of what may be called the firſt order of local venereal complaints, as a bubo may with propriety be ſaid to be of the ſecond. In this laſt, though the venereal matter is at firſt ſtill confined to the gland, yet, as it is a ſtage farther advanced in its progreſs, there is more danger of a general affection of the conſtitution.

From what has been juſt ſaid, it will appear evident, that our object in the cure of a chancre ought to be, either its *total deſtruction*, or at leaſt the

the *deſtruction* of the *venereal poiſon*. Theſe are in fact two different *indications*. The firſt can only be accompliſhed by ſuch means as may remove the whole diſeaſe at once, as *exciſion* with the *knife*, or at leaſt ſo far deſtroy its organization as to render it no longer an integral part of the living ſyſtem, as by the *application* of *cauſtic*. The ſecond, or the deſtruction of the venereal poiſon, is to be obtained only by a proper application of mercury.

Were a ſurgeon always conſulted for a chancre immediately on its breaking out, the moſt effectual, and perhaps upon the whole the leaſt troubleſome method, would be, when it was ſeated on the prepuce or frenum, as it commonly is, to remove it at once with the knife. This would in general be a very ſimple operation: it would only be removing a bit of diſeaſed ſkin, ſcarcely ſo large perhaps as a common pea; and there is every reaſon to think it would be completely ſucceſsful; in the ſame way as cutting out the bite of a mad dog effectually ſecures the perſon againſt the effects of the poiſon.

But this operation could be done with ſafety and ſucceſs, only where the diſeaſe had been noticed on its firſt breaking out, and where it was ſeated on the prepuce or frenum, or on the common ſkin. Where this operation, from the diſeaſe being ſeated on the glans, or from its continuance for ſome days, may not be adviſeable, ſtill we have it in our power, by the application of cauſtic, to deſtroy the part ſoon enough, at leaſt to diminiſh very much the chance of a general contamination. So long, therefore, as the ſore ſtill continues ſmall, this method ought to be employed, and the application of the cauſtic repeated from time to time, as the ſlough falls off, till the parts beneath look red and healthy.

The

The firſt of theſe operations, the *exciſion* with the knife, however, is ſeldom in the ſurgeon's choice. He is not often conſulted early enough; and if he were, few patients would ſubmit to what they would conſider an unneceſſary ſeverity, when they might be cured by gentler, though more tedious means. The ſecond, the *extirpation* with *cauſtic* is oftener in his power, and more frequently practiſed. Still, however, it is ſeldom employed early enough; and even though it were, its operation is ſo ſlow, as to leave ground, almoſt in every inſtance, to ſuſpect that the conſtitution would be affected. The ſame attention, therefore, to the conſtitution, becomes requiſite *here*, as under the next mode of management, which I now proceed to conſider.

When the former methods, from the extent of the ſore, or the length of time it has continued, are either thought inadviſeable or not ſubmitted to, our attention is next directed to the deſtruction of the venereal poiſon. This, it was remarked, is only to be accompliſhed by a proper uſe of mercury. Mercury may be employed for this purpoſe in different ways: It may either be applied *locally* to the *ſore*, or it may be given to affect the *ſyſtem* in *general*, and *through it* the *ſore*; or it may be given in *both ways* at the ſame time.

A chancre, it was obſerved, is at firſt, and for ſome time, always a local complaint; nor do we know how long it may take to contaminate the whole ſyſtem. As long, however, as the communication betwixt the ſore and the ſyſtem, by means of the circulation, continues ſo imperfect, that the ſyſtem does not ſympathiſe, or is not affected with the diſeaſes of the ſore; *ſo long*, we may preſume, on the other hand, the ſore would not ſympathiſe, or be affected with the cure of the ſyſtem.

ſyſtem. *Mercury*, therefore, *adminiſtered internally* for the cure of a local diſeaſe, can probably have no effect on that diſeaſe, ſo long as it continues local. As it is only by the communication between the *part* and the *whole*, that the *whole* became diſeaſed, ſo it can only be by the ſame communication between the whole and the part, that the part can be cured. A chancre, therefore, at its firſt appearance, ought not to be truſted to the internal uſe of mercury, as that medicine can probably have no effect upon it in this way, till it becomes a general diſeaſe.

The adminiſtration of mercury internally for the cure of chancres had its origin in the opinion, that chancres, and all other venereal ſores, were ſymptoms of a general affection of the conſtitution. So ſubtle a poiſon as the venereal, it was thought, could not be preſent in a part without contaminating the whole, and therefore mercury, which was known to be the antidote, was adminiſtered likewiſe to the whole. Nor were ſpecious arguments, it muſt be acknowledged, awanting to ſupport ſuch a concluſion. Chancres, if not cured, never fail to produce the *lues*, which can be cured only by a general adminiſtration of mercury. The *lues*, again, generally appears in local complaints, very much reſembling chancres, which yield only to a complete courſe of mercury. Nay, even chancres themſelves very generally yield to a courſe of mercury. This, we have already ſeen, can only happen when chancres are no longer local complaints, but having contaminated the general ſyſtem with their own diſeaſe, neceſſarily participate with it again in the general cure.

It was afterwards obſerved, however, that ſome chancres did not yield to a courſe of mercury, while they were cured by external local applications. This firſt led to the opinion, that chancres

plication of leeches here may likewiſe be of ſervice in leſſening the inflammation.

But the principal difficulty conſiſts in the management of the ſores when theſe are covered by the prepuce, as they cannot be got at to be dreſſed and managed in the uſual way. When the ſores are but ſmall or ſuperficial, and the ſtricture only moderate, we endeavour, by means of injections frequently thrown in between the glans and prepuce, to clean and heal the ſore; whilſt we, at the ſame time, adminiſter a courſe of mercury internally, with a view to its local as well as conſtitutional effect. One of the beſt injections for this purpoſe, is a ſolution of corroſive ſublimate in water, in the proportion of a grain to the ounce. When the chancre is not deep ſeated, and the ſtricture only moderate, we have it often in our power, by means of a probe, to apply mercurial dreſſings to the part, as a pledget of lint, covered with the common blue ointment, or any other preparation of mercury. This, whenever the ſituation of the ſore and the ſtate of the parts will allow, ought not to be neglected. By a combination of ſuch applications to the part, as circumſtances will admit, with a complete courſe of mercury internally, we may in general, in this ſituation, be able to accompliſh a cure without having recourſe to more violent means.

But when the chancre is extenſive or deep, and the matter from the tightneſs of the ſtricture cannot be diſcharged externally, but is confined behind the glans; in this ſituation, the operation for phymoſis is neceſſary, to prevent worſe conſequences; for the confinement of the matter will not only prevent the healing of the ſores, and the ſubſiding of the inflammation, but, by the irritation which it excites, will ſoon force its way through the prepuce. This ought, therefore, to be always prevented,

prevented, by an operation which it would be foreign to our deſign to deſcribe in this place, and for which we refer to writers on ſurgery.

Beſide the diſeaſe juſt mentioned, theſe parts are liable, from the ſame cauſe, to another diſeaſe very ſimilar. Both diſeaſes are produced by inflammation and ſtricture of the prepuce, from whatever cauſes theſe may originate; and as chancre is perhaps one of the moſt frequent of theſe exciting cauſes, I have thought proper to conſider the two diſeaſes under this head. They may, however, be produced by a violent gonorrhœa, or even by external violence. When the inflammation and ſtricture of the prepuce take place *before* the glans, the diſeaſe, as we have already ſeen, gets the name of *phymoſis*; when the inflammation and ſtricture take place behind the glans, it is called a *paraphymoſis*. In the firſt, the prepuce cannot be drawn back ſo as to uncover the glans; in the laſt, it cannot be brought forward to cover it.

As *paraphymoſis* is produced by the ſame cauſes nearly as phymoſis, the means already pointed out for preventing this laſt, apply with equal propriety to the prevention of the former. One particularity, however, reſpecting paraphymoſis, deſerves to be mentioned. The diſeaſe is not unfrequently produced by the patient himſelf, in endeavouring to draw back the prepuce in an incipient phymoſis. This, therefore, ſhould never be attempted where any conſiderable ſtricture of the prepuce takes place, as this ſtricture is always attended with much more danger when ſeated behind the glans than before it. On the contrary, it is alway ſafe, and proper, to endeavour, by every gentle means, to reduce a paraphymoſis, even though at the riſk of inducing a phymoſis.

This, at the commencement of the complaint,

we have it often in our power to accompliſh; and, as little effect can be expected here from the application of remedies ſo long as the ſtricture continues, no time ſhould be loſt in waiting their operation. Only it may be proper, before we attempt the reduction, to bathe the glans for a few minutes in a cold ſolution of ſugar of lead; or if that be not at hand, in a little cold water or vinegar. The operator ought alſo to immerſe his hands for a minute or two in the ſame cold ſolution. He muſt now take hold of the glans with the finger and thumb of one hand; and, after ſqueezing the blood out of it as carefully as poſſible, he muſt puſh it gently backwards, whilſt, with the finger and thumb of the other hand, he endeavours to draw forwards the prepuce. Though he ſhould even fail in the firſt attempt, yet, by repeatedly bathing the parts, as well as his hands, in the ſolution, and carefully preſſing out the blood from the glans, at the ſame time that he endeavours to puſh it gently back with one hand, and to draw forwards the prepuce with the other, he will often be able to ſucceed at laſt. In this manner, he may frequently remove a dangerous diſeaſe, or preclude a painful operation; and as the means are neither difficult nor dangerous, they ſhould always be employed in the firſt inſtance.

Sometimes, however, every endeavour to reduce a paraphymoſis will prove unſucceſsful. This frequently happens from the length of time the diſeaſe has been allowed to continue before any attempt was made to reduce it; and ſometimes it is the conſequence of a great degree of previous inflammation of the parts. Indeed, wherever the diſeaſe has already continued for any conſiderable length of time, and is attended with a great degree of inflammation of the parts, very little time

ſhould

ſhould be loſt in endeavouring to reduce it; as in this ſituation it can ſcarcely ſucceed, and handling the parts freely may aggravate the diſeaſe. The operation for paraphymoſis in this caſe, becomes abſolutely neceſſary to prevent mortification. This it is not my buſineſs here to deſcribe; I ſhall only obſerve, that in ſuch circumſtances, both deciſion and diſpatch are neceſſary, as a little trifling or delay may render the operation too late to prevent mortification of the glans or prepuce.

OF BUBOES.

Buboes, it has already been remarked, as well as chancres, are at firſt merely local affections, not depending on, nor neceſſarily connected with, a general diſeaſe of the ſyſtem. As chancres may occaſionally occur on any part of the ſurface of the body, from the application of venereal matter, ſo *buboes*, which are merely the conſequence of the abſorption of that matter by the lymphatics, in its progreſs to the general circulation, may occur in any of the external lymphatic glands, ſeated between that ſurface and the heart. But as chancres, from the manner in which the venereal diſeaſe is uſually communicated, are commonly ſeated on the parts of generation, buboes, from the ſame cauſe, are moſt frequent in the lymphatic glands of the groin.

groin. Sometimes, however, they occur on the inſide of the elbow or in the arm-pit, from venereal ſores on the hand or arm, or on the inſide of the knee and the upper part of the thigh, from venereal ſores on the foot and leg. When they are the conſequence of venereal ſores about the lips or tongue, they are ſeated beneath the under jaw, or on the neck.

A *venereal bubo* is a ſwelling of a lymphatic gland, from the abſorption of venereal matter. This matter, on being applied to the ſkin, uſually ſhows itſelf there, as we have already ſeen, in the form of ulceration or chancre. From this it is again taken up by the lymphatic veſſels which ariſe from all parts of the body; and in its courſe to the circulation, the venereal matter commonly produces a ſwelling of the neareſt lymphatic gland. Thus a bubo generally takes place in the groin from a chancre of the penis or parts contiguous; and if a chancre be ſeated on one ſide, the bubo commonly occupies the ſame. When a chancre occupies the middle, a bubo may be ſeated indifferently on either ſide.

But though the venereal poiſon, in entering the ſyſtem, uſually obſerves the progreſs which has been juſt noticed, appearing firſt in the form of chancre, and afterwards producing bubo, yet this ſucceſſion of ſymptoms is by no means univerſal. Though a bubo be in general preceded by a chancre, yet as this laſt often occurs without producing bubo, a bubo ſometimes occurs without any previous chancre. This, however, is allowed to be a rare occurrence even in appearance, and is perhaps ſtill more ſo in reality, as ſlight venereal ſores may eaſily be ſuppoſed to take place on ſome occaſions unobſerved.

In treating of gonorrhœa, I had occaſion to remark, that ſwellings of the lymphatic glands of the groin ſometimes occurred in that diſeaſe. They

They may likewiſe proceed from the acrid matter of a common ſore. Theſe have been denominated Sympathetic Buboes, and are carefully to be diſtinguiſhed from the venereal bubo, of which I am now ſpeaking. The venereal bubo is always the conſequence of the abſorption of venereal matter, while the ſympathetic bubo proceeds from any thing acrid (uſually the matter of gonorrhœa) irritating the lymphatic veſſels. The firſt is moſtly always either preceded by, or accompanied with, a venereal ſore or chancre, and is uſually confined to a ſingle gland, which, as it increaſes gradually in ſize, is attended with conſiderable pain and inflammation. The laſt proceeds evidently either from the acrid matter of a gonorrhœa, or of ſome ſore that is not venereal, uſually affects ſeveral glands at the ſame time, which ſeldom increaſe to any conſiderable ſize, or are attended with much pain and inflammation.

Beſide the ſympathetic bubo juſt mentioned, the venereal bubo may be confounded with ſome other affections of theſe parts, as *lumbar abſceſs* or *hernia*. A venereal *bubo* may in general be diſtinguiſhed from *lumbar abſceſs*, by the previous hiſtory of the two diſeaſes; the *firſt* is uſually preceded by a venereal ſore or chancre, or occurs ſoon after ſome ſuſpicious connection; the *laſt* is moſtly always preceded by, or attended with pain, inflammation, and weakneſs of the ſmall of the back and about the loins. The ſwelling in the firſt is for ſome time ſmall, hard, and moveable, attended with conſiderable pain on preſſure; and when a ſuppuration takes place, the ſkin appears thin and inflamed, with the matter ſuperficial and the fluctuation diſtinct. The ſwelling in the ſecond is never ſo ſmall and circumſcribed as in the firſt; is not a hard moveable tumor at its commencement; nor is the fluctuation of matter afterwards

wards ſo diſtinct, the abſceſs appearing deeper ſeated, and the ſkin, inſtead of being thin and inflamed, as in the former, often is ſound and natural.

From a *hernia*, a *bubo* may be diſtinguiſhed by the following marks. A bubo is at firſt, as has already been remarked, always hard and moveable; a hernia, on the contrary, has a ſoft doughy feel, and cannot be made to roll under the fingers; in a more advanced ſtate, a bubo is attended with ſevere pain on handling, often with inflammation of the ſkin; while in hernia, in general the ſkin is neither inflamed, nor is handling attended with uneaſineſs. In the laſt ſtage of bubo, the fluctuation of matter ſerves ſufficiently to diſtinguiſh it from hernia. The hiſtory of the two complaints, alſo, will in general ſufficiently mark the two diſeaſes. Venereal bubo is moſtly always the conſequence of ſome venereal ſore or chancre; whilſt hernia, without having any thing in common with bubo in its origin, has often a train of ſymptoms peculiar to itſelf, as ſickneſs, vomiting, conſtipated bowels, &c.

OF THE CURE OF VENEREAL BUBOES.

As a venereal bubo is in general merely a local affection, independent of any general diſeaſe of the ſyſtem, its cure muſt be conducted on the general principal laid down for the cure of local venereal diſeaſes, and in particular for the cure of chancre. The general *intention* or the *end* being the ſame in both, it is required only that we ſhould vary the means according to the particular circumſtances of each. While, therefore, I refer to what has been already ſaid on theſe ſubjects, for thoſe principles on which the general treatment is founded, I ſhall here

here conſider only the management of bubo, in ſo far as it is particular.

The treatment of bubo, it is obvious then, from the principles already laid down, embraces two objects; *firſt*, the *cure* of the *local affection* or *bubo*, *ſecondly*, the *ſafety* of the *conſtitution*. And, *firſt*, Of the local affection.

The cure of bubo, like that of every other local venereal affection, muſt depend, in the firſt place, on the general principle, the application of mercury to the part; and in the next place, on the application of ſuch other remedies as may remove theſe accidental affections, that may either have been excited by, or be connected with the general diſeaſe.

Though the cure of bubo, as of every other venereal ſore, depends upon a proper application of mercury, yet this cure may be conducted in two different ways; that is, either by *reſolution* or *ſuppuration*. Bubo was long conſidered as depending on a general diſeaſe of the ſyſtem, and as an effort of nature, as it was termed, to throw off the morbific matter. As this could be accompliſhed only by ſuppuration, whatever tended to promote this, was conſidered as conducive to the cure; while, on the contrary, every thing of an oppoſite tendency was looked on as counteracting this ſalutary effect. While ſuch ideas of the nature of this complaint prevailed, the practice neceſſarily turned ſolely on the moſt effectual means for bringing a bubo to ſuppuration. Even when this was accompliſhed, however, which, according to their idea of the diſeaſe, ought to have been ſufficient for the cure, ſtill mercury was thought indiſpenſably neceſſary; ſo that, by this practice, nothing was ſaved to the patient in reſpect of the medicine neceſſary to be taken, while a great deal of time was neceſſarily loſt in bringing forward

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the bubo, beſide the great additional pain and hazard that was thereby incurred.

But if the practice of ſuppurating a bubo was wrong, even on the principles of thoſe who followed it, it were certainly unneceſſary to ſay much in refutation of it at preſent, when our ideas of the diſeaſe are ſo completely changed. Bubo is now generally allowed to be merely a local diſeaſe; inſtead of ſerving to mark an effort of nature of ſalutary tendency, which ought to be promoted, it is conſidered as the operation of a dangerous diſeaſe, in its progreſs from a local to a general affection, which ought to be reſiſted by every means in our power. This leads me, therefore, to the conſideration of the moſt effectual means for diſcuſſing a bubo.

The diſcuſſion of a bubo is to be attempted on two general principles; firſt, by the deſtruction of the venereal poiſon, or the original *cauſe* of the diſeaſe; ſecondly, by obviating the *effects* already induced, as inflammation, &c.

Mercury may be uſed for deſtroying the venereal poiſon of a bubo in two ways: it may either be given internally, to affect the ſyſtem, and through it the part; or it may be applied locally, to affect the part. The ſame general principles that led us, in conſidering the treatment of chancre, to prefer the local application of mercury combined with its internal uſe, would lead us to adopt a ſimilar practice in this complaint. Fortunately, however, both theſe intentions may be accompliſhed in this complaint, by the ſame means; as the moſt effectual method of applying mercury locally, is here the beſt way to affect the ſyſtem; that is, by inunction. Mercury, for the cure of bubo, ought always to be uſed in this way, as combining the advantages of a *local* with a *general effect*.

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When a bubo is ſeated in the groin, as it uſually is, ſome of the common blue mercurial ointment ought immediately to be rubbed in. The quantity muſt be determined by the ſtate of the diſeaſe, and the habit of the patient. In proportion as the bubo is farther advanced, the faſter ought mercury, in general, to be rubbed in, to prevent ſuppuration. At the ſame time, regard muſt be had to the conſtitution, as a quantity of mercury perfectly ſafe and innocent in a ſound healthy ſtate of body, might prove highly dangerous in a weakly debilitated habit. In general, however, from half a dram to a dram, or near the ſize of a hazel-nut, more or leſs according to circumſtances, of the ſtrong blue ointment, may be rubbed in morning and evening. In this ſituation, or where the bubo is in the groin, the inunction ſhould take place chiefly on the inſide of the thigh and leg of the ſame ſide, and betwixt the bubo and the private parts, or the chancre, where this complaint preceded the other. And, in general, wherever a bubo is ſeated, when it is the conſequence of chancre, the ointment is partly at leaſt to be rubbed in betwixt the ſore and the gland: I ſay partly, becauſe, in the common ſituation of bubo in the groin, there is not ſpace enough to rub in the neceſſary quantity of ointment betwixt that and the ſore. In this caſe, therefore, the remainder muſt be rubbed in on the neighbourhood, as the inſide of the leg and thigh of the ſame, or even of the oppoſite, ſide.

This operation of *inunction*, when confined always to the ſame ſpot, is apt to produce conſiderable pain and inflammation; to prevent which, ſome care and attention are neceſſary. The part on which the inunction is to be performed, ought to be firſt ſhaved, to prevent the fretting and rubbing of the hairs; and afterwards, well waſhed with

with ſoap and water, to facilitate the abſorption of the ointment. The friction, too, ſhould be gentle and ſlow, and ought to be performed by the patient himſelf, wherever this can be done. It ſhould be continued each time, till the quantity of ointment already mentioned be conſumed. This, in cold weather, will be conſiderably promoted by the heat of a fire.

The *length of time* this unction ſhould be continued, muſt be regulated chiefly by two circumſtances, the effect produced on the bubo, and the operation of the mercury on the conſtitution. In general, however, it ought to be continued, either till the bubo be completely diſcuſſed, or if it ſuppurate, till it be completely healed, and for ſome time thereafter, as one or two weeks. Where the mercury, however, produces conſiderable effect on the ſyſtem, before it ſhews its full operation on the bubo, by its diſcuſſion, it will be neceſſary, either to intermit the medicine altogether for a little, till its general effect ſubſide, or at leaſt to continue the rubbing very ſparingly, ſo as not to increaſe it. When the mercury, on the contrary, produces a cure of the bubo, without ſhewing any effects on the ſyſtem, it ought to be continued till ſome conſtitutional effects likewiſe appear, that we may be aſſured of the ſafety of the conſtitution, as well as of the cure of the bubo.

This method of exhibiting mercury by *unction* for the cure of bubo, poſſeſſes manifeſt advantages over its internal exhibition. By thus bringing mercury immediately into contact with the local diſeaſe, we take the moſt effectual means in our power to prevent the contamination of the ſyſtem; and ſhould even this take place, ſtill, as the medicine enters the body by the ſame channel with the diſeaſe, the ſmalleſt quantity of the medicine,

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as well as the ſhorteſt ſpace of time, will be neceſſary for its cure.

While we thus uſe mercury, however, to deſtroy the venereal poiſon, the *cauſe* of this affection of the gland, we muſt at the ſame time not overlook the *effects* produced. Mercury is a ſpecific for this affection of a gland, only ſo far as it is venereal; where other modes of action take place, other remedies become neceſſary. On this principle, therefore, in every caſe of inflamed bubo, we are careful to employ, along with mercury, ſuch other means as we know to be moſt effectual in diſcuſſing inflammation. In the firſt place, abſolute reſt, or freedom from all motion, as far at leaſt as the circumſtances of the patient will admit, is indiſpenſably neceſſary. At the ſame time, his diet ſhould be low, conſiſting moſtly of vegetables; and where much pain and inflammation take place, bleeding as well as purging may be proper. The beſt application to the part, is a cold ſaturnine poultice, or, where the inflammation is violent, a number of leeches.

By a careful combination of the means juſt pointed out for removing inflammation, with a due attention at the ſame time to the inunction with mercury, we uſually have it in our power, when application has been made ſufficiently early, to diſcuſs a bubo; the pain and inflammation gradually ſubſide, and the gland returns to its natural ſize; or, if it ſhould continue a little enlarged for ſome time, as frequently happens, it is without pain or uneaſineſs. But in this method of curing a bubo, which is in every reſpect the eaſieſt and ſhorteſt, we are not unfrequently diſappointed. Frequently the diſeaſe is allowed to proceed too far before advice be taken; and ſtill oftener after taking advice, the patient,

from obſtinacy or negligence, ſometimes from neceſſity, does not purſue the means neceſſary to enſure ſucceſs. From all or any of theſe cauſes, buboes ſometimes proceed to *ſuppuration*. Even then, we ſhould not be in too great haſte to make uſe of means to bring them forward. By a proper application of the remedies already pointed out for diſcuſſing a bubo, this may ſometimes be accompliſhed after a partial ſuppuration has taken place.

When the formation of matter to any conſiderable extent has taken place in bubo, which will be known by the fluctuation, and eſpecially when the ſkin becomes inflamed and tender, as reſolution in this ſituation is hardly to be expected, a warm emollient poultice ſhould be applied to bring it forward, and to thin the ſkin. At the ſame time, the mercurial inunction ought ſtill to be continued, with a view both to the cure of the local complaint, and likewiſe to the ſafety of the conſtitution. In this way, leſs mercury will afterwards be neceſſary to heal the bubo when it does break, as well as to ſecure the conſtitution.

It has long been a matter of diſpute, whether a bubo, after being fully ſuppurated, ſhould be opened with a lancet, or allowed to break of its own accord. There ſeems to be nothing, however, in the nature of a bubo, more than of any other abſceſs, that ſhould determine us in general to adopt the one mode in preference to the other. The choice of the one or the other, muſt depend ſolely upon the particular circumſtances of the caſe. When a bubo is ſmall and ſuperficial, I believe it may be ſafely truſted to break of its own accord. Where the abſceſs is of more extent and deeper ſeated, there would ſeem to be more reaſon for laying it open. Yet even here, I believe, little is gained by the practice. For though the

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abſceſs may be opened a conſiderable time before it would have broke of itſelf, it commonly afterwards heals more ſlowly in proportion. So that it is only when the abſceſs is already fully ſuppurated, and from the thinneſs of the ſkin appears ready to break, that this ought to be done; and even then, rather with a view to enſure a free exit to the matter, than to anticipate the period of its eruption.

A bubo, after breaking or being opened, is to be conſidered on the footing merely of any other primary venereal ſore, and muſt be treated according to the directions already given for the management of chancre. The mercurial inunction ought ſtill to be continued, with a view to its local effect on the ſore, as well as its general effect on the conſtitution. The ſore may be dreſſed with common cerate, or, what is perhaps ſtill better, with the common blue mercurial ointment; and if due attention be at the ſame time paid to the management of the conſtitution, it will in general heal readily.

But this progreſs, as was already remarked in the caſe of chancre, is ſometimes interrupted by the ſore, after healing to a certain extent, becoming ſtationary at laſt. This will ſometimes be got the better of, by changing the nature of the dreſſings to the ſore, and altering the patient's mode of living. Inſtead of mild dreſſings, ſtimulant applications often anſwer better here. The ſore, after being waſhed with a ſolution of corroſive ſublimate in water, in the proportion of one or two grains to the ounce, according to the effect, may be dreſſed with ſome common baſilican, combined with a dram or a dram and a half of red precipitate to the ounce. A little dry lint often makes a very good dreſſing to the bottom of the ſore in this ſtate; and where the

edges have become hard and callous, they ſhould be touched occaſionally with cauſtic. Attention at the ſame time ſhould be given to the patient's general health, where this has already ſuffered from a protracted courſe of mercury. He ſhould be allowed a little moderate exerciſe, with the enjoyment of freſh air. His diet ſhould be good and nouriſhing, with a few glaſſes of ſound port wine daily; and where the ſtomach will admit, one or two drams of the bark may be taken every forenoon. By combining thus, a due attention to the general health, with a judicious local management, we in general have it in our power to accompliſh a cure of ſores of this deſcription, if not accompanied with ſome other diſeaſe of the conſtitution. Of this I mean to treat in the next ſection.

OF SOME OF THE CONSEQUENCES OF BUBOES.

Though mercury be an effectual cure for bubo in every ſtage of the complaint, ſo far as it is ſtrictly venereal; yet this diſeaſe is not unfrequently combined with other diſeaſes of the conſtitution, or of the part on which mercury has no effect. The moſt frequent as well as the beſt marked inſtance of this, which alone I mean to notice here, is in the combination of bubo with ſcrophula. This ſhows itſelf, I think, in two different ſtates of bubo, in the inflammatory and in the ulcrated ſtate. And, firſt, of the inflammatory.

A ſimple venereal bubo ſeldom continues for any length of time of the ſame ſize. Where mercury has been properly applied in due time, and in ſufficient quantity, the ſwelling gradually ſubſides till the gland be reduced to nearly its natural dimenſions. On the contrary, where this has been too long

long delayed, or not properly applied, the gland commonly ſoon comes forward to ſuppuration. But in this conjunction of bubo with ſcrophula, which I am now ſpeaking of, the gland, after coming to a certain ſize, remains ſtationary. Mercury and other topical applications have no effect in diſcuſſing it; nor are we more ſucceſsful in our attempts to bring it to a ſuppuration.

As this complaint frequently occurs in patients who have never had any other ſymptoms of ſcrophula, it is often productive of great uncertainty, as well as uneaſineſs, both to the ſurgeon and patient. I believe, however, it will in general be found, upon a careful inquiry, that ſuch patients are either deſcended of ſcrophulous parents, or haye themſelves the marks of a ſcrophulous diſpoſition; and upon this principle is founded our plan of treatment.

Wherever a bubo has reſiſted a complete mercurial courſe conducted in the manner recommended, and diſcutient and maturant applications have equally failed of effect, it ſhould no longer be conſidered as venereal, but as ſcrophulous. Mercury therefore, and indeed all applications to the part, whether with a view to diſcuſs or ſuppurate it, ſhould be laid aſide. The patient, if reſiding in town, ſhould be ſent to ſome healthy ſituation in the country, where he may at the ſame time enjoy the benefit of ſea-bathing. This, with plenty of exerciſe, eſpecially on horſeback, with a good nouriſhing diet, and a moderate uſe of wine, will often ſucceed in diſcuſſing a bubo that had reſiſted all the common means. I have known one inſtance in particular, where a bubo of this kind, after reſiſting nearly two years, every other means that could be thought of, yielded at laſt, during the courſe of the ſecond winter, to ſevere exerciſe on horſeback, particularly in fol-

lowing the hounds, which this gentleman did three or four times a-week, for a conſiderable part of the winter.

The other ſtate of bubo, already taken notice of as ſometimes connected with ſcrophula, is the ulcerated. A bubo in general, that has been allowed to come to a full maturation before being opened, heals readily, merely by continuing the mercurial inunction a little longer, and keeping up the effects of the medicine on the ſyſtem for ſome time. But ſometimes, inſtead of healing, the ſore becomes ſtationary, and mercury, though rubbed in ſo as to effect the ſyſtem completely, has no farther effect upon it. At other times, inſtead of continuing ſtationary, it becomes worſe and worſe; and though the ſyſtem be completely loaded with mercury, the ſore continues to ſpread daily; or if it heal up in one place, breaks out in another, preſenting an irregular worm-eaten appearance.

Sores of this deſcription we judge to be no longer venereal, from mercury ceaſing to have any farther effect upon them; at the ſame time that we are inclined to think them ſcrophulous, from their occurring chiefly under the ſame circumſtances with the indurated bubo we have juſt been mentioning. The ſame plan of treatment is therefore to be followed. Mercury is immediately to be laid aſide. Country air and exerciſe, with a nouriſhing diet and a moderate uſe of wine, are to be injoined. Sometimes, however, a milk-diet with vegetables has accompliſhed a cure in this ſituation. In ſome caſes, the tepid bath, in others the cold bath, have been found uſeful; while in ſome, the uſe of hemlock internally in large quantities, with a hemlock-poultice to the part, have ſucceeded after every other means almoſt had been tried in vain. When the

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ſore is accompanied with a copious diſcharge of thin matter, barks have been found ſerviceable; and where it is attended with conſiderable pain, opiates ſhould be uſed freely.

OF LOCAL VENEREAL COMPLAINTS IN WOMEN.

Chancres and buboes in women correſpond ſo perfectly, both in their appearance and method of treatment, with the ſame complaints in men, that I have judged it unneceſſary to allot a ſeparate ſection for their conſideration. The only real difference between theſe complaints in men, and the ſame diſeaſes in women, is in reſpect of their ſituation.

The common ſeat of chancre in women, is on the Labia Pudendi, Nymphæ, Clitoris. Sometimes, though more rarely, they occur on the Mons Veneris or Perinæum. Wherever they take place, they require nearly the ſame treatment as in men; only as dreſſings are with difficulty kept applied in the former ſituations, waſhes ought frequently to be uſed, as ſolutions of corroſive ſublimate, of the ſame ſtrength as before recommended for chancres in men. The parts affected here, too, being more ſimple in their ſtructure and functions than thoſe in men, chancres in women are not ſo often complicated with other diſeaſes, and therefore in general more eaſily managed.

Buboes in women have preciſely the ſame appearance as in men. They are uſually ſeated on the round ligament, near to where it enters the abdomen. Sometimes they occur near the external labium, in the angle betwixt this and the thigh. Whatever be their ſituation, their treatment is ſo preciſely ſimilar to thoſe in men, that I think it unneceſſary to ſay any thing farther on this ſubject.

OF THE LUES OR POX.

The complaints hitherto deſcribed, chancre and bubo, are always *primary* or original ſymptoms, produced by the external application of the venereal poiſon to the part affected. The ſymptoms which we are now to deſcribe, are always *ſecondary*, depending upou a previous diſeaſe of the conſtitution. The firſt, though in their progreſs they become general or conſtitutional, are in their origin always local; the laſt, though in their progreſs they appear local, are in their origin always general.

The conſtitutional form of the diſeaſe is commonly preceded by the local. For the moſt part, the diſeaſe appears firſt in the form of chancres, ſometimes in that of buboes, whence the ſyſtem comes afterwards to be contaminated by abſorption. Sometimes, however, though rarely, the diſeaſe appears firſt in a conſtitutional form without any previous local complaints. In which ever of theſe ways the diſeaſe has been received, it commonly proceeds to ſhow its effects in the ſame way upon the ſyſtem. Theſe I ſhall now conſider in the order in which they uſually appear; at

at the ſame time it muſt be remarked, that in this reſpect great variety occurs.

Venereal ſores in the *throat, and mouth.*—If the local effects ariſing from the application of the venereal matter to the ſurface, were, as has been already obſerved, various in different individuals, in reſpect of the *time* as well as *form* of their appearance, the conſtitutional ones, after it has entered, are at leaſt equally ſo in both reſpects. In particular inſtances, theſe have appeared in the courſe of two or three weeks from the period of infection, while in others, as is alleged, they have been obſerved at the diſtance of ſeveral years. The moſt frequent period, however, is about two or three months from the time of infection.

But if they vary in reſpect to the *time* of their appearance, they differ at leaſt as much in reſpect of their *form*. Sometimes the diſeaſe appears firſt in the form of venereal blotches on the ſkin; at other times its firſt attacks are on the bones or perioſteum; while ulcers of the *throat* are more generally the firſt ſymptoms of this diſeaſe.

Ulcers occur on various parts of the throat, as the uvula, the velum pendulum palati; moſt frequently, however, they are ſeated on one of the amygdalæ. On their firſt appearance, they are uſually ſmall, but deep for their ſize, and always foul, with a diſtinctly marked margin. As they are ſeldom attended with much pain, and indeed produce but little inconvenience, except a ſlight uneaſineſs on ſwallowing, they are often ſuffered to remain for a conſiderable time, without exciting much attention, being miſtaken perhaps for a common ſore throat. On inſpecting the parts, however, a ſmall foul ulcer is commonly obſerved on one of the amygdalæ. Sometimes, as was remarked, it is ſeated on the uvula, or velum

lum pendulum palati, the inſide of the mouth, or on the tongue. As this is liable to be confounded with ſome other affections of theſe parts, I ſhall now point out the chief means of diſtinction.

The *venereal ſore throat* may be diſtinguiſhed from the common inflammatory ſore throat, by the hiſtory of the two diſeaſes. The firſt, as has already been remarked, commonly ſucceeds ſome local venereal affection, as chancre or bubo, where mercury either has not been given in ſufficient quantity, or continued for a due length of time: the laſt, without being preceded by any other venereal affection, is uſually the immediate effect of expoſure to cold, and often accompanied with other ſymptoms of catarrh. The appearances of the two complaints are generally very different. In the firſt ſtage, the inflammatory ſore throat is diſtinguiſhed from the venereal by the abſence of ulceration, which always accompanies the laſt; while this laſt, on the other hand, is without that general inflammation and tumefaction of the parts that commonly accompany the former. The ſecond ſtage of inflammatory ſore throat, or that which ſupervenes upon ſuppuration, is diſtinguiſhed from the venereal, by the very different appearance of an abſceſs, with a ſmall clean opening, and a conſiderable extent of inflammation and redneſs, from a foul venereal ſore, with a well-defined margin, and but little general inflammation of the parts, as well as by the previous hiſtory of the caſe; an abſceſs, before it comes to a ſuppuration, being always attended with much more pain, inflammation, and ſwelling of the parts, than a venereal ulcer ever is.

The putrid ſore throat, from its being attended with leſs inflammation and ſwelling of the parts, and from ulceration here immediately ſupervening

vening upon inflammation, without the formation of an abſceſs, might be liable to be miſtaken for this complaint. But beſide the ſymptoms of a putrid fever, which in general ſerve ſufficiently to diſtinguiſh this diſeaſe from the venereal, the ulcerations in this diſeaſe are commonly numerous, extenſive, and ſuperficial; while in the venereal ſore throat, there is commonly but one ſmall deep ulcer.

Venereal ſores, inſtead of occupying one or other of the amygdalæ, as uſually happens, ſometimes make their appearance on the cheeks, inſide of the tongue, or on the palate. In this laſt ſituation the ulceration commonly ſpreads rapidly, and from the bones being but thinly covered here with ſoft parts, ſoon affect them with caries. Indeed, the appearance of the complaint here ſeems to render it probable, that the bones become firſt injured, and the ſoft parts only in a ſecondary way. The ulceration here does not proceed in a ſlow gradual manner from the ſurface till it reach the bone, but the ſoft parts become at once inflamed to ſome extent, and then drop out in patches, as it were, of conſiderable ſize.

Venereal ſores of theſe parts have been miſtaken for cancerous affections, to which, it muſt be allowed, they bear a great reſemblance; but they may in general be diſtinguiſhed from them by attention to their hiſtory, and by their being unattended with thoſe ſevere lancinating pains, that almoſt conſtantly accompany cancerous affections.

Ulcerations ariſing from the uſe of mercury, have ſometimes been miſtaken for venereal ſores. Theſe, however, may in general be known by their occurring chiefly at the time the mercurial courſe is at its height, and from their taking place uſually on thoſe parts of the cheeks and tongue

tongue which, when they become inflamed and ſwelled from mercury, are moſt expoſed to be injured by the teeth. Nor have the ſores, in this caſe, the foul, deep inflammatory appearance of venereal ulcers.

Venereal ſores on the *Noſe*.—When this diſeaſe is allowed to take its natural courſe, as ſometimes happens among the lower claſs of people, it commonly, after affecting the throat for ſome time, proceeds to attack the noſe. And even when mercury has been exhibited in ſufficient quantity to cure the affection of the throat, yet if it have not been continued for a ſufficient length of time afterwards to ſecure the conſtitution, the diſeaſe, on its return, uſually appears firſt on the noſe. This progreſs of the diſeaſe, however, though frequent, is not invariable; as it ſometimes, on its return, re-appears on the parts before affected, while in other inſtances it returns in the form of blotches on the ſkin, or in nodes and ſwellings of the bones, perioſteum, &c.

In the noſe, the diſeaſe uſually attacks firſt the membrane lining the inſide of the noſtrils. Perhaps the bones here, too, as was remarked of the palate, are the parts firſt affected, and the affection of the membrane only ſecondary; at leaſt, ſimilar appearances would ſeem to warrant a ſimilar concluſion. At any rate, the internal membrane of the noſe is firſt affected with inflammation and ſwelling. The patient uſually complains for ſome time of a degree of fulneſs, and a ſtoppage of the noſtril affected, which, on inſpection, appears red and inflamed. This is afterwards attended with conſiderable pain at ſome particular part of the noſtril. When this can be inſpected, it commonly appears covered with a dry ſcurf or ſcab, which, on being removed, leaves the

the parts beneath ulcerated. But often the affection takes place ſo high in the noſtril, that the part cannot be brought into view. The diſeaſe, however, continuing to advance, the bones ſoon appear carious. The diſcharge, which hitherto was moderate in quantity, becomes now copious, and from a whitiſh purulent appearance, changes to a black colour, with a highly fœtid ſmell. Different portions of bone begin to ſeparate, and come away with the matter; and the diſeaſe continuing to ſpread, the outſide of the noſe becomes inflamed and ſwelled. The tears, from the paſſage being inflamed and obſtructed, run down the cheeks: and the ſenſe of ſmelling becomes more or leſs affected. In this ſituation, the bone forming the partition of the noſe often becomes carious and gives way, ſo that the noſe falls almoſt flat upon the face.

Sometimes, however, this diſeaſe, inſtead of attacking the upper and bony part of the noſe, affects its lower cartilaginous extremity. In this caſe, the diſeaſe appears firſt on the outſide of one of the cartilaginous wings of the noſe, in the form of a ſmall ſcab or ulcer. This, as it continues to ſpread gradually, corrodes the parts on which it is ſeated, aſſuming much the appearance of a cancerous ſore. So that both the alæ, or wings of the noſe, are often completely deſtroyed, while the upper bony portion remains perfectly entire. The very different progreſs of the diſeaſe in this ſituation, from what it takes when ſeated on the upper and bony part of the noſe, ſeems a farther confirmation of what was advanced in treating of the venereal affection of the palate. In both theſe ſituations, the diſeaſe advances ſo rapidly, that the ſoft parts ſeem to ſlough off, as it were, from the diſeaſed bones beneath; while the diſeaſe

uſually

uſually advances ſlowly on the cartilaginous part of the noſe, or the amygdalæ, in the form of a phagedenic or cancerous ſore, gradually corroding the ſoft parts, but often continuing long before any of the bones become affected.

Venereal ſores, when ſeated on the under and fleſhy parts of the noſe, reſemble very much, as was already remarked, cancerous affections of theſe parts. Indeed, they are to be diſtinguiſhed from them, almoſt ſolely by a careful attention to their hiſtory, or by obſerving the effects produced on them by a courſe of mercury. Cancerous affections, too, are commonly attended with more ſevere darting pains, than almoſt ever accompany ſimple venereal ſores.

Venereal blotches on the ſkin.—The venereal diſeaſe, after attacking the throat and noſe, uſually makes its appearance next on the ſkin, in the form of *blotches*. This is the common progreſs of the diſeaſe, whether it have been ſuffered to take its natural courſe, or where this may have been interrupted by the uſe of mercury, to the extent of curing the local ſymptoms, but not of ſecuring the conſtitution. Venereal blotches appear occaſionally on every part of the body. Though no external part be exempted from their attacks, yet they appear moſt frequently, or moſt early in the diſeaſe, on the upper part of the body, as the breaſt and arms, and afterwards on the lower extremities.

Theſe blotches appear often at firſt in a ſort of mottled ſpots up and down the body, diſappearing in ſome places, while they continue or increaſe in others. Often, however, they appear under a more permanent form, like diſtinct inflamed patches, of the ſize of a ſixpence or a ſhilling. Theſe patches appear of a dull red colour, not ſenſibly elevated above the ſurface, with

with the ſkin ſtill entire. A dingy copper-coloured ſcurf gradually forms upon each of theſe, which, after continuing for ſome time, falls off, and is ſucceeded by another of the ſame kind. Theſe ſcurfs, as they are conſtantly renewed, become gradually thicker and thicker, till they aſſume the appearance of a common ſcab, which, when it falls off, leaves the parts beneath in a ſtate of ulceration.

This is the common progreſs of a venereal blotch, from its firſt appearance till it terminate in an open ulcer. But ſometimes the diſeaſe appears at the firſt like ſmall flat pimples, which ſuppurate, ſcab, and then run together, till they form ulcers of various extent. The diſeaſe, too, in attacking various parts of the body, has its appearance ſomewhat varied from the nature of the part on which it is ſeated.

When it attacks the palms of the hands, and the ſoles of the feet, a ſcab in this ſituation is not formed, owing to the thickneſs of the cuticle. This therefore ſeparates in ſucceſſive layers, till the parts beneath at laſt become ulcerated.

The diſeaſe, too, ſometimes attacks thoſe parts of the hands and feet that are covered by the nails. In this caſe the parts beneath the nails become firſt red and inflamed, and, after the diſeaſe has continued for ſome time, the nail at laſt becomes looſe, and then ſeparates.

In ſome parts of the body, as in the arm-pits, betwixt the thighs, between the nates, or about the anus, where the ſkin, from the contact of the oppoſite ſurface, is preſerved in a more thin and moiſt ſtate, the eruptions ſeldom or never appear in the form of ſcurfs or ſcabs. In theſe ſituations the ſkin is commonly elevated into a ſort of veſication, which at laſt breaks and diſcharges a whitiſh purulent matter.

Venereal

Venereal blotches are liable to be confounded with other diſeaſes of the ſkin, particularly with herpetic affections. From theſe they may in general be diſtinguiſhed by attention to the hiſtory of the caſe, as venereal blotches ſeldom occur, but after ſome other ſymptom of this diſeaſe, whilſt herpetic eruptions are apt to recur repeatedly in the ſame perſon. The appearances alſo of the two diſeaſes are generally ſomewhat different. Venereal blotches, as was already remarked, commonly appear at firſt like ſo many dull red, or mottled ſpots, not perceptibly elevated above the ſurface; whilſt herpetic eruptions almoſt conſtantly make their appearance in the form of little diſtinct pimples, which afterwards frequently run together into cluſters. Venereal blotches are likewiſe in general of a more uniform figure and ſize, ſeldom exceeding the ſize of a ſhilling, whilſt herpetic affections are more irregular in their ſize, as well as appearance, frequently aſſuming a circular form.

OF VENEREAL ULCERS.

As venereal ulcers are a common conſequence of the complaint juſt now treated of, I ſhall offer a few obſervations here on their hiſtory, and the means of diſtinguiſhing them from other diſeaſes with which they are liable to be confounded. In treating

reating of chancres and buboes, I have already had occaſion to deſcribe local venereal ſores, and ſhall therefore take no farther notice of them here. It is only the conſtitutional venereal ulcer, or that which depends upon a general contamination of the ſyſtem, that I am now to deſcribe.

This ſort of ulcer, as has already been remarked, is very generally preceded by the venereal blotch. At other times, inſtead of being preceded by the true venereal blotch, it ſucceeds to thoſe little flat, inflammatory tumors, or pimples, formerly deſcribed as a variety of the venereal blotch. In whichever way it may originate, the ſore commonly puts on one uniform appearance, except in ſo far as it may be modified, either by a diverſity of the parts on which it is ſeated, or by a connection with ſome other diſeaſe.

Venereal ulcers occur occaſionally on almoſt every part of the ſurface. I have already had occaſion to deſcribe their appearance when ſeated in the throat, mouth, or noſe. As they very uſually ſucceed venereal blotches, they appear like theſe on every part of the body. They may in general be diſtinguiſhed from other ſores by the following appearances: They are always very foul and ill conditioned; nor does any medicine, except mercury, ſeem to produce any change on their appearance. The matter diſcharged is commonly of a green or yellowiſh colour, with a highly fœtid ſmell; and it uſually adheres ſo firmly, that it cannot be ſeperated from the ſurface of the ſore. Venereal ſores are ſeldom either attended with much pain or inflammation, at leaſt the inflammation is uſually confined, in a great meaſure, to the margin of the ſore, giving it a diſtinct circumſcribed appearance. The edges of the ſore commonly appear retracted and uneven, often hard and callous.

The venereal ſore varies a good deal in its appearance, from the nature of the parts on which it is ſeated. When it occurs on any of the ſoft parts, as on the amygdalæ, or glans penis, it uſually rather goes deep, than extends to any conſiderable breadth, preſenting to us a deep ſore, with a narrow orifice. On the contrary, when ſeated above any of the hard thin bones, as thoſe of the palate or noſe, it ſpreads ſo rapidly as to give reaſon to imagine, as has already been remarked, that the bones were primarily affected, and the ſoft parts only in a ſecondary way. The ſoft parts in this ſituation ſeem to ſlough off in ſpots or patches, as it were, from the parts beneath.

An exception, however, to this obſervation, ſeems to occur in thoſe ſores that ſucceed to ſuppurated buboes. Theſe, eſpecially when ſeated in the groin, ſpread ſometimes to a great extent, without going to any conſiderable depth. In this ſituation, little ſores, after breaking out here and there upon the ſound ſkin, often run together, ſo as to cover a conſiderable extent of the lower part of the belly, or of the upper part of the thigh. This appearance of ſore I believe to be generally owing either to ſome general diſeaſe of the conſtitution, as ſcrophula; or to ſome accidental complaint, as debility.

The above obſervations on *Venereal Sores* apply, in general, equally to the *local* and *conſtitutional* ulcer. Indeed it may be remarked, that theſe two affections, the local and the conſtitutional venereal ſore, preſent ſo entirely the ſame appearance, that they are to be diſtinguiſhed from one another only by the different ſeat of the diſeaſe in the two complaints, or by the hiſtory of the caſe. Local venereal ſores are commonly, from the mode in which the infection

is

is conveyed, ſeated on the private parts; whilſt conſtitutional ſores of theſe parts very ſeldom occur. But ſometimes local venereal ſores appear on the lips, as in children; or on the nipples, as in nurſes, &c. The nature of theſe, however, may in general be determined with ſufficient accuracy, by attending to the hiſtory of the caſe, for local affections appear only either on the part immediately expoſed to the infection, or in ſome part of the lymphatic ſyſtem in the neighbourhood.

Venereal ulcers, as has already been obſerved, are not confined to the ſoft parts; they frequently affect the bones. This happens in two ways; ſometimes the bones are firſt affected, and the ſoft parts ſuffer only in a ſecondary way; of this I ſhall treat more particularly in the next ſection, in ſpeaking of nodes, and other diſeaſes of the bones. But the bones likewiſe often ſuffer in a ſecondary way, from the deſtruction of the ſoft parts with which they are covered. Theſe affections are eaſily to be diſtinguiſhed from ſimple venereal ulcers of the ſoft parts, by the luxuriant growth of fungous fleſh, with which they are uſually filled, and by the carious bone being felt beneath by the probe. They are to be diſtinguiſhed from ſimple caries of the bones, only by the previous hiſtory, or by the peculiar appearance of the ulceration in the ſoft parts; as a caries of the bones, from whatever cauſe, aſſumes nearly the ſame appearance.

OF NODES AND OTHER AFFECTIONS OF THE BONES AND PERIOSTEUM.

I HAVE already had occaſion to remark, that the bones, as well as the perioſteum, frequently become affected in venereal ulcers, from the ſoft parts which cover them having been previouſly deſtroyed. This ſecondary affection of theſe parts was taken notice of in the laſt ſection, as a variety of the venereal ulcer. Sometimes, however, the bones and perioſteum, inſtead of becoming diſeaſed in this *ſecondary* way, are the parts *primarily* affected. This primary affection of theſe parts, then, ſhall form the ſubject of the preſent ſection.

The bones and perioſteum ſeem to be affected in two different ways, by the venereal poiſon. Sometimes it produces a ſimple enlargement and ſwelling, without any caries of the bone. In this caſe, one or more circumſcribed tumors are the firſt ſymptoms of the complaint. This tumor is at firſt always ſmall, ſeldom exceeding the ſize of a ſmall bean, and perfectly firm and incompreſſible. On its firſt appearance, and for ſome time afterwards, it commonly produces but little uneaſineſs; as it increaſes, however, gradually in ſize, it frequently, by diſtending the perioſteum, occaſions very ſevere pain. This affection, which we have juſt deſcribed, conſtitutes the true venereal node. The bone, though enlarged, is not carious, and the ſkin ſtill remains entire. But it does not long continue ſo where the diſeaſe is allowed to proceed. The ſoft parts at laſt inflame,

inflame, and then ulcerate; and this ulceration of the ſoft parts is uſually accompanied with a caries of the bones beneath.

The other affection to which theſe parts are liable, though a good deal reſembling this in appearance, is yet of a very different nature. The tumor in this caſe has nearly the ſame appearance as in the former. It is commonly ſmall when firſt perceived, and increaſes gradually to the ſize of a large bean. It is ſeldom attended with much pain or inflammation, till the latter ſtages of the complaint; when, upon being opened by an inciſion, or ſuffered to break of itſelf, it is found to conſiſt of a ſlight effuſion of a colourleſs fluid, between the perioſteum and the bone, and the bone always more or leſs diſeaſed, but without being enlarged.

It is to be diſtinguiſhed from the bony tumor mentioned before, by its being leſs firm, and more compreſſible, and by the fluctuation of a fluid, being perceptible at leaſt in the latter ſtage of the complaint.

Theſe two affections occur occaſionally on almoſt every bone of the body. But they are particularly frequent on ſuch bones as are thinly covered, as the bones of the cranium, the ſternum, the tibia, and different parts of the radius and ulna. Sometimes, too, they occur on the thigh bones, as well as on thoſe of the hands and feet.

The only diſeaſe which theſe are in much danger of being confounded with, are the different rheumatic affections of theſe parts. But from rheumatiſm they may in general be diſtinguiſhed by the following marks: Rheumatic ſwellings commonly occupy the joints, while venereal affections are almoſt confined to the hardeſt and firmeſt part of

each bone, or nearly to its center. Rheumatiſm, too, commonly occupies a conſiderable part of the limb or joint on which it is ſeated; while the venereal affection is generally limited to a ſingle ſmall ſpot, where, on examination, a ſmall circumſcribed tumor is uſually found, perfectly different from that ſoft diffuſed ſwelling that uſually accompanies rheumatiſm.

OF THE CURE OF THE CONSTITUTIONAL VENEREAL DISEASE.

Under whatever form this diſeaſe may appear, whether *local* or *conſtitutional*, ſo far as it is ſtrictly venereal, mercury proves an infallible ſpecific. It is only when this diſeaſe is connected with other diſeaſes, either of the conſtitution or of the part, that we are diſappointed in our expectations from the uſe of mercury. But if we can ſuccced, by medicine or otherwiſe, in removing thoſe conſtitutional or local diſeaſes, which are ſuperadded to the venereal diſeaſe, mercury, we find, recovers again its uſual ſpecific power over the complaint. This has already been obſerved to be the caſe in local venereal complaints; and it is equally effectual in the conſtitutional form of the diſeaſe. Indeed, if there be any difference in reſpect of the ſpecific power of mercury over the two forms of this diſeaſe, it ſeems leſs deciſive ſtill with regard to the local than the conſtitutional form. Sometimes local venereal complaints, as chancre, for example, may be completely cured by

by cauſtic or ſtrong eſcharotics; while the conſtitutional lues, ſo far as we hitherto know, can be with certainty cured only by mercury.

In treating of the cure of local venereal complaints, I took occaſion, along with the general adminiſtration of mercury to ſecure the conſtitution, to recommend the local application of it to the parts affected. This I did with a view to cure the local diſeaſe as ſoon as poſſible, by bringing the medicine more immediately into contact with the poiſon, and thus to prevent, as much as we can, a general contamination of the ſyſtem; as the danger of a general contamination of the ſyſtem is always in proportion to the continuance and extent of the local diſeaſe. In conſtitutional lues, it is obvious, however, that the ſame reaſon no longer exiſts. Here the conſtitution is already contaminated, and the particular *local effects* originate only in a more general diſeaſe of the *whole*. The firſt object of our care here, therefore, is the *general* or *primary diſeaſe*; after which the *local effects* or *ſymptoms* next demand our attention. This diviſion naturally leads me to conſider, in the firſt place, the moſt proper method of exhibiting mercury for the cure of the general diſeaſe, and then to take notice of ſuch peculiarities as occur in the treatment of particular local complaints.

Mercury may be given to affect the ſyſtem in two different ways; it may either be given internally, ſo as to enter by the abſorbents of the ſtomach and inteſtines, or it may be applied externally to the abſorbents of the ſurface. For external application, too, the medicine has been uſed in different forms, ſometimes in the form of vapour, and at other times in the form of an ointment.

As mercury was at firſt introduced for the cure of the venereal diſeaſe, from the reſemblance of

this complaint to ſome other cutaneous affections, for which mercury applied externally had been found a remedy, we find, that on its firſt introduction it was uſed only in the form of external applications. Theſe were either *fumigations* or *inunctions*. Fumigation was in uſe for the cure of this deſeaſe as early as the beginning of the ſixteenth century, or, in other words, in a few years after the diſeaſe firſt appeared, or at leaſt was noticed and deſcribed. Even at this period, however, though there can be no queſtion of fumigation having frequently ſucceeded, it was looked upon both as a dangerous and uncertain remedy. From the arſenical and other poiſonous fumes mixed with the mercury, and inhaled by the lungs, the moſt deleterious effects ſometimes enſued. This danger was afterwards in a great meaſure obviated, by uſing only the milder preparations or purer ores of this mineral. Still, however, the effects of the remedy, either from its own nature, or the mode in which it was adminiſtered, were not found permanent, and the diſeaſe, notwithſtanding every attention, frequently returned. From this cauſe, fumigations, though ſtill uſed ſometimes with a view to their local effects, are now almoſt univerſally laid aſide when we wiſh to affect the conſtitution.

Inunction, which was one of the firſt modes of applying mercury for the cure of this diſeaſe, is ſtill perhaps the ſafeſt and the moſt effectual, and combines the moſt advantages with the feweſt inconveniences. From the extent of the ſurface to which we can apply it at the ſame time, we can in this way throw in a greater quantity in a given time, than by the mouth, at the ſame time that we run leſs riſk of injuring the ſtomach or bowels by the medicine, or of having it run off by

by ſtool. Whenever, therefore, from the particular ſituation of the patient, or the ſtate of the diſeaſe, we wiſh to charge the ſyſtem with mercury as ſpeedily as poſſible, or when the internal exhibition of mercury, from the debilitated ſtate of the patient, or the irritability of his bowels, might be attended with ſome riſk, in all theſe ſituations the method by inunction is greatly preferable.

Another ſituation of the ſame deſcription muſt not be omitted, where we wiſh to combine, for inſtance, the local effect of mercury on a particular part, with its general effect on the conſtitution; for example, in bubo. Inunction in this ſituation has the advantage of acting both locally and conſtitutionally at the ſame time. For the rules neceſſary to be obſerved in the management of this operation, I refer to what was already ſaid on this ſubject, on the cure of bubo.

The advantages of the method by *inunction* are ſo important, that we need not be ſurpriſed to find it ſometimes attended with inconveniences. The moſt conſiderable of theſe, in general, are the trouble and naſtineſs of the operation itſelf. The friction muſt be continued for a conſiderable length of time every day, to rub in the proper quantity of the ointment, which often wearies and fatigues the patient; and as the operation is not only rather diſagreeable of itſelf, but even leaves the patient in a naſty uncomfortable ſtate after it is over, (for it is ſcarcely poſſible for him to keep himſelf quite clean and comfortable during the inunction), this in general creates an averſion to the practice. Any little inconvenience of this kind, however, is amply compenſated by the ſuperior ſafety, as well as expedition, of this proceſs; ſo

ſo that it ought to be univerſally practiſed, wherever it ſuits the ſituation of the patient.

Patients labouring under this diſeaſe are ſometimes in circumſtances, however, where the employment of this method is altogether impracticable, or might be attended with the moſt unpleaſant conſequences. In ſuch circumſtances, therefore, we are under the neceſſity of having recourſe to the internal exhibition of mercury. For this purpoſe, the common blue pills of the Edinburgh Diſpenſary are perhaps one of the beſt preparations. Of theſe one may be given, two or three times a-day, till the intended effect be produced. When they affect the bowels, as is often the caſe, eſpecially at firſt, one grain of opium may be given along with each. Keeping the body warmly clothed, and taking the medicine ſoon after meals, inſtead of taking it on an empty ſtomach, will contribute to the ſame effect.

OF THE CONTINUANCE OF A MERCURIAL COURSE, AND THE QUANTITY OF THE MEDICINE THAT SHOULD BE GIVEN.

THE *length of time* during which a courſe of mercury ſhould be continued, and the *quantity of the medicine* to be adminiſtered, cannot in any particular inſtance be determined beforehand, and muſt be regulated ſolely by the effects produced on the diſeaſe. In general, however, it may be obſerved, that as we truſt chiefly to the operation of mercury on the ſyſtem for the cure of the conſtitutional ſymptoms of lues, it ought uſually to be continued for a conſiderable time after theſe have diſappeared. By continuing the medicine

medicine for two or three weeks after thoſe ſymptoms of the diſeaſe for which it was adminiſtered have been entirely removed, we may in general be aſſured of the ſafety of the conſtitution.

But this rule, though it may apply with tolerable accuracy to thoſe diſeaſes where the ſoft parts only are concerned, by no means extends to affections of the bones and perioſteum. Theſe parts, as they enter ſlowly into diſeaſe, recover alſo ſlowly; and caries, and other affections of the bones, often remain long after the venereal virus which produced them has been entirely eradicated. The continuance, therefore, of a mercurial courſe during the whole proceſs of the exfoliation of a bone, (which is frequently very tedious), would not only be unneceſſary, but even hurtful; as, by weakening the ſyſtem too much, it would retard the very operation it was meant to promote. In this ſituation, after keeping the ſyſtem, for ſix or eight weeks perhaps, (more or leſs according to the particular circumſtances of the caſe), completely under the influence of mercury, we then ſuffer the proceſs of exfoliation to take its natural courſe; and if, after this has taken place, the ſore ſhould refuſe to heal, or ſhould put on a venereal appearance, we treat it like any other venereal ſore.

The *quantity* of *mercury* neceſſary to the cure of any particular venereal complaint, can ſtill leſs, perhaps, than the duration of a mercurial courſe, be determined beforehand. This will depend not only on the very different effect produced by the ſame quantity of the medicine on different conſtitutions, and even on the ſame conſtitution at different times, but likewiſe on the more or leſs complete preparation of the medicine that is uſed. Any general rule, therefore, with regard to

to the quantity, muſt be vague and uncertain; it muſt depend always on the effect produced; and that again will vary with different conſtitutions, or different preparations of the medicine. It may be obſerved, however, in general, that the local venereal complaints require leſs mercury than the conſtitutional forms of this diſeaſe; and of theſe laſt, ſuch as occur earlieſt in the diſeaſe, as ulcers of the throat and mouth, &c. in general require leſs than thoſe that occur later in the diſeaſe, as affections of the bones and perioſteum.

But it is not on the *duration* of a *mercurial courſe*, or the *quantity* of the medicine adminiſtered, that the cure of venereal complaints altogether depends. A courſe of mercury may be continued for a ſufficient length of time, and much of the medicine may be given, while yet the cure ſhall remain incomplete, from the ſyſtem either not having been ſufficiently affected with mercury, or from that effect not having been continued for a ſufficient length of time. In the management, therefore, of a mercurial courſe, our firſt object is to bring the ſyſtem completely under the influence of mercury, and then to keep it in this ſituation during the continuance of the courſe. For this purpoſe, mercury ſhould be given in ſmall doſes at firſt, till once we have in ſome meaſure aſcertained the patient's capacity for bearing the medicine, when it ought to be given in doſes proportioned to the extent of this, till the ſyſtem be completely affected. Thus, in giving the common blue pill, we begin with one morning and evening; or, in adminiſtering the common blue mercurial ointment, we begin with half a dram or two ſcruples, morning and evening, ſo as to rub in one ounce of the ointment in the firſt ſix or ſeven days; after continuing

tinuing this courſe for a week, if we find the patient bears the medicine well, we increaſe the quantity one third, or even a half, according to circumſtances; if it be the blue pill, we give one three times a-day for a while; and if he bear that, then four times; or if it be the common ointment, we increaſe the quantity, firſt to a dram, or a dram and a half, and if he bear that eaſily, then to two drams, morning and evening. This courſe muſt be continued till ſome degree of ſalivation, or at leaſt conſiderable ſoreneſs and inflammation of the mouth, take place. When this riſes to any conſiderable degree, the mercury ſhould be diſcontinued for a day or two, till it begin to ſubſide, and ſhould then be renewed in ſmaller doſes, ſo as to keep the ſyſtem fully loaded during the whole cure. In this way a complete cure will be ſooneſt obtained, and with the ſmalleſt quantity of mercury.

The directions ſo commonly given on the head of *Regimen* during a mercurial courſe, I believe to be in general ſuperfluous, and often hurtful. Mercury, after being continued for ſome time, commonly induces ſome degree of heat and thirſt, with other ſymptoms of increaſed action in the vaſcular ſyſtem. With a view to moderate this, low living, or abſtinence from all animal food, eſpecially during the beginning of the courſe has been commended. To ſhow the fallacy of this kind of reaſoning, however, I preſume it will be ſufficient to obſerve, that theſe febrile ſymptoms, from the uſe of mercury, are generally moſt conſpicuous in the weak and debilitated, while they are either altogether awanting, or leſs obſervable, in ſuch as enjoy ſtrong vigorous health. I am of opinion, therefore, that any attempt to lower the ſyſtem, with a view to diminiſh the action of mercury upon it, has commonly a contrary effect, by increaſing

creaſing the irritability; and therefore that the ſame regimen that conduces to the moſt perfect ſtate of health, is moſt favourable to the action of mercury. But as the continuance of a mercurial courſe for any great length of time, is apt to weaken and exhauſt the patient, care ſhould be taken to ſupport him, with nouriſhing broths and ſoups, jellies, &c. A moderate uſe of bark and wine, in this ſituation, is likewiſe peculiarly proper.

The only thing that requires particular attention in this reſpect, is the article of clothing; mercury, eſpecially when taken internally, being apt, to paſs off by ſtool, and thus to loſe its general operation on the ſyſtem. In this ſituation, we obſerve the ſame conſent between the veſſels of the ſurface and thoſe of the ſtomach, that is ſo conſpicuous in many other inſtances. Thus, whatever determines more powerfully to the ſurface, takes off from the internal parts in the ſame proportion, as external heat, or that which is induced by accumulating the heat of the body on the ſurface by means of warm clothing, as flannel or woollen. When mercury, therefore, is to be taken internally, eſpecially in cold weather, the patient ſhould take care to keep himſelf warm, and particularly to wear warm clothing, as flannel or woollen. At the ſame time, however, that he ſhould avoid all expoſure to ſevere cold, and particularly to dampneſs or moiſture, it is not abſolutely neceſſary for him to confine himſelf to his chamber, and ſtill leſs to keep his apartment in a high degree of temparature. Provided he be properly clothed, a patient may be occaſionally abroad in the open air during the day; and, at any rate, his apartment ſhould be large and well aired, and not kept too hot.

OF

OF THE LOCAL TREATMENT OF CONSTITUTIONAL VENEREAL COMPLAINTS.

As we depend in general, as before obſerved, for the cure of conſtitutional venereal complaints, on the proper management of a mercurial courſe, which has, we hope, been fully explained, there remains but little to be ſaid on their *local treatment*. I am now to offer a few obſervations on this, ſo far as it requires any particular attention.

OF THE LOCAL TREATMENT OF VENEREAL ULCERS OF THE THROAT, MOUTH, AND NOSE.

Venereal ulcers of theſe parts frequently ſpread with great rapidity, deſtroying not only the ſoft parts where they appear, but likewiſe the bones above which they are ſeated. As a ſound ſtate of theſe, however, is abſolutely neceſſary, if not to the patient's exiſtence, at leaſt to his future comfort and happineſs, their treatment demands our utmoſt attention. In this ſituation, then, while we adminiſter mercury with as much freedom as the patient's conſtitution will admit, for the radical cure of the diſeaſe, we at the ſame time endeavour to retard its progreſs by applications to the parts affected. With this view, we make uſe of the different eſcharotics recommended for the cure of chancre, when the diſeaſe is ſeated externally, as on the noſe; and when the internal parts, as the mouth and throat, are affected, we have recourſe to the uſe of cauſtic. This may be applied

applied freely, and ſhould be repeated occaſionally, till the parts put on a clean and healthy appearance; when they will commonly heal with eaſe, provided a ſufficient quantity of mercury has been given to cure the conſtitutional diſeaſe. This circumſtance, it muſt be obſerved, requires particular attention in thoſe caſes where the cure of conſtitutional affections have been haſtened by local applications. In ſuch circumſtances, mercury ought to be continued for three or four weeks after the venereal ſymptoms have entirely diſappeared.

OF THE TREATMENT OF VENEREAL BLOTCHES.

Venereal blotches, except when they are allowed to ulcerate, ſcarcely require any particular local treatment. As they commonly appear later in the diſeaſe, however, than the ſymptoms laſt enumerated, they not unfrequently prove more obſtinate in their removal. When the uſual preparations of mercury, as the common blue ointment or pill, have failed to produce this effect, the corroſive ſublimate has in ſome inſtances been found to ſucceed. The beſt form of adminiſtering this medicine, is diſſolved in a large quantity of ſome mucilaginous fluid, ſo as to dilute and ſheath its acrimony. The common decoction anſwers well for this purpoſe. About half a grain of the medicine, diſſolved in a pound of the decoction, ſhould be taken daily for ſome time. This may afterwards, if the patient can bear it, be increaſed to one grain diſſolved in two pounds of the fluid, to be taken in equal quantities, at three or four different times, in the courſe of twenty-four

four hours; and to be continued for one month, at leaſt, after the venereal ſymptoms have diſappeared.

OF THE TREATMENT OF NODES, AND SWELLINGS OF THE BONES AND PERIOSTEUM.

Affections of the bones and perioſteum being uſually one of the laſt ſymptoms of this diſeaſe, are in general among the moſt difficult of cure. Theſe firmer and more permanent parts are brought but ſlowly, and as it were with difficulty, to conſent with the reſt of the ſyſtem, either in its diſeaſe or recovery. A well-regulated courſe of mercury, continued for a great length of time, is uſualy requiſite in this ſituation. Along with this, much attention is often neceſſary to the local treatment.

The venereal node or ſwelling of the bone, as well as that tumor which is found by an effuſion etween the perioſteum and the bone, are frequently attended with violent pain from the diſtenſion of the perioſteum. When this is not relieved by the exhibition of mercury, an inciſion muſt be made through that membrane down to the bone.

This operation will, in general, afford effectual relief from the pain, and, where the bone is not ſpoiled, will commonly be all that is requiſite; where the bone has become carious, an exfoliation muſt take place, which is to be conducted according to the principles laid down in books of ſurgery.

DISEASES OF WOMEN.

The diſeaſes peculiar to women ariſe chiefly from their monthly evacuations, pregnancy, and child birth. Females generally begin to menſtruate about the age of fifteen, and leave it off about fifty, which renders theſe two periods the moſt critical of their lives. About the firſt appearance of this diſcharge, the conſtitution undergoes a very conſiderable change, generally indeed for the better, but ſometimes for the worſe. The greateſt care is now neceſſary, as the future health and happineſs of the female depends, in a great meaſure, upon her conduct at this period. If a girl about this time of life be confined to the houſe, kept conſtantly ſitting, and neither allowed to romp about, nor employed in ſome active buſineſs, which gives exerciſe to the whole body, ſhe becomes weak, relaxed, and puny; her blood not being duly prepared, ſhe looks pale and wan; her health, ſpirits, and vigour decline, and ſhe ſinks into a valetudinary for life. Such is the fate of numbers of thoſe unhappy females who, either from the indulgence of mothers, or their own narrow circumſtances, are, at this critical period of life, denied the benefit of exerciſe and free air.

A lazy indolent diſpoſition proves very hurtful to girls at this period. One ſeldom meets with complaints from obſtructions amongſt the more active and laborious part of the ſex; whereas the indolent and lazy are ſeldom free from them. Theſe are, in a manner, eat up by the *chloroſis*, or green ſickneſs, and other diſeaſes of this nature We would therefore recommend it to all who wiſh to eſcape theſe calamities, to avoid indolence and inactivity, at

as their greateſt enemies, and to take as much exerciſe, eſpecially in the open air, as poſſible.

Another thing that proves very hurtful to girls about this period of life, is unwholeſome food. Fond of all manner of traſh, they often eat every out-of-the-way thing they can get, till their blood and humours are quite vitiated. Hence enſue indigeſtions, want of appetite, and a whole train of evils. If the fluids be not duly prepared, it is utterly impoſſible that the ſecretions ſhould be properly performed: Accordingly, we find that ſuch girls as lead an indolent life, and eat great quantities of traſh, are not only ſubject to obſtructions of the *menſes*, but likewiſe to glandular obſtructions; as the ſcrophula or king's-evil, &c.

A dull diſpoſition is likewiſe very hurtful to girls at this period. It is a rare thing to ſee a ſprightly young girl who does not enjoy good health, while the grave, moping, melancholy creature, proves the very prey of vapours and hyſterics, Youth is the ſeaſon for mirth and chearfulneſs. Let it therefore be indulged. It is an abſolute duty. To lay in a ſtock of health in time of youth, is as neceſſary a piece of prudence, as to make proviſion againſt the decays of old age. While, therefore, wiſe Nature prompts the happy youth to join in ſprightly amuſements, let not the ſevere dictates of hoary age forbid the uſeful impulſe, nor damp with ſerious gloom the ſeaſons deſtined to mirth and innocent feſtivity.

Another thing very hurtful to females about this period of life is ſtrait clothes. They are fond of a fine ſhape, and fooliſhly imagine, that this can be acquired by ſtrait clothes. Hence, by ſqueezing their ſtomach and bowels, they hurt the digeſtion, and occaſion many incurable maladies.

This error is not indeed ſo common as it has been; but, as faſhions change, it may come in again; we therefore, think it not improper to mention it. I know many females who, to this day, feel the direful effects of that wretched cuſtom which prevailed ſome time ago, of ſqueezing every girl into as ſmall a ſize in the middle as poſſible. Human invention could not poſſibly have deviſed a practice more deſtructive to health.

After a female has arrived at that period of life when the *menſes* uſually begin to flow, and they do not appear, but, on the contrary, her health and ſpirits begin to decline, we would adviſe, inſtead of ſhutting the poor girl up in the houſe, and doſing her with ſteel, aſafœtida, and other nauſeous drugs, to place her in a ſituation where ſhe can enjoy the benefit of free air and agreeable company. There let her eat wholeſome food, take plenty of exerciſe and amuſements, and we have little reaſon to fear but Nature, thus aſſiſted, will do her proper work. She ſeldom fails, unleſs where the fault is on our ſide.

When the *menſes* have once begun to flow, the greateſt care ſhould be taken to avoid every thing that may tend to obſtruct them. Females ought to be exceedingly careful of what they eat or drink at the time they are out of order. Every thing that is cold, or apt to ſour on the ſtomach, ought to be avoided; as fruit, butter-milk, and ſuch like. Fiſh, and all kinds of food that are hard of digeſtion, are alſo to be avoided. As it is impoſſible to mention every thing that may diſagree with individuals at this time, we would recommend it to every female to be very atentive to what diſagrees with her own ſtomach, and carefully to avoid it.

Cold is extremely hurtful to females at this particular

particular period. More of the ſex date their diſorders from colds, caught while they were out of order, than from all other cauſes. This ought ſurely to put them upon their guard, and to make them very circumſpect in their conduct at ſuch times. A degree of cold that will not in the leaſt hurt them at another time, will, at this period, be ſufficient to ruin their health and conſtitution altogether.

The greateſt attention ought at this time to be paid to the mind, which ſhould be kept as eaſy and chearful as poſſible. Every part of the animal œconomy is influenced by the paſſions, but none more ſo than this. Anger, fear, grief, and other affections of the mind, often occaſion obſtructions of the menſtrual flux, which prove abſolutely incurable.

From whatever cauſe this flux is obſtructed, unleſs the female be pregnant, proper means ſhould be uſed to reſtore it. For this purpoſe we would recommend plenty of exerciſe, in a dry, open, and rather cool air; wholeſome diet, and, if the body be weak and languid, generous liquors; alſo chearful company, and all manner of amuſements. If theſe fail, the following medicines may be tried.

If the obſtructions proceed from a weak relaxed ſtate of the ſolids, ſuch medicines as tend to promote digeſtion, to brace the ſolids, and aſſiſt the body in preparing good blood, ought to be uſed. The principal of theſe are iron, the Jeſuits bark, and other bitter and aſtringent medicines. Filings of iron may be infuſed in wine or ale, two ounces to an Engliſh quart, and after it has ſtood in a warm place twenty-four hours, it may be ſtrained, and a ſmall cupful drank three or four times a-day; or they may be reduced to a fine powder, and taken in the doſe of half a dram,

mixed with a little honey or treacle, three or four times a-day. The bark and other bitters may either be taken in ſubſtance or infuſion, as is moſt agreeble to the patient.

When obſtructions proceed from a viſcid ſtate of the blood, and the patient is of a groſs full habit, evacuations, and ſuch medicines as attenuate the humours, are neceſſary. The patient, in this caſe, ought to be bled, to bathe her feet frequently in warm water, to take now and then a doſe of cooling phyſic, and to live upon a ſpare thin diet. Her drink ſhould be whey, water, or ſmall beer, and ſhe ought to take plenty of exerciſe.

When obſtructions proceed from affections of the mind, every method ſhould be taken to amuſe and divert the patient. And that ſhe may the more readily forget the cauſe of her affliction, ſhe ought, if poſſible, to be removed from the place where it happened. A change of place, by preſenting the mind with a variety of new objects, has often a very happy influence in relieving it from the deepeſt diſtreſs. A ſoothing, kind, and affable behaviour, to perſons in this ſituation, is alſo of the laſt importance. This would often prevent the fatal conſequences which proceed from a *harſh* treatment of females, who are ſo unfortunate as to be croſſed in their inclinations, or who meet with diſappointments in love, &c.

Though many diſeaſes proceed from obſtruction, it is not always to be conſidered as the cauſe, but often as the effect of other maladies. When that is the caſe, inſtead of giving medicines to force down the *menſes*, which might be dangerous, we ought, by all means to endeavour to reſtore the patient's health and ſtrength. When that is effected, the other will return of courſe.

But the menſtrual flux may be too great, as well as too

too ſmall. When that is the caſe, the patient becomes weak, the colour pale, the appetite and digeſtion are bad, and œdematous ſwellings of the feet, dropſies and conſumptions, often enſue. This frequently happens to women about the age of forty-five or fifty, and is very difficult to cure. It may proceed from a ſedentary life; a full diet, conſiſting chiefly of ſalted, high ſeaſoned, or acrid food; the exceſſive uſe of ſpiritous liquors; too much exerciſe; violent paſſions of the mind, &c.

To reſtrain this flux, the patient ought to be kept quiet and eaſy both in body and mind. If it be very violent, ſhe ought to lie in bed with her head low; to live upon a cool and ſlender diet, as eal or chicken-broths, with bread; and to drink decoctions of nettle-roots, or the greater comfrey. If theſe be not ſufficient to ſtop the flux, ſtronger aſtringents may be uſed, as alum, dragons blood, &c. As much powdered alum as will lie on a ſixpence may be taken in a glaſs of red wine twice or thrice a-day, or oftener if the patient's ſtomach can bear it. Such as cannot take alum in ſubſtance may uſe the alum-whey. Females who have frequent returns of this complaint, ought to uſe the Jeſuits bark for a conſiderable time. Half a dram of bark may be mixed in a glaſs of red wine three or four times a-day, or it may be taken in common water, and ſharpened with ſpirits of vitriol

But the *uterine flux* may offend in quality as well as in quantity. What is uſually called the *fluor albus*, or whites, is a very common diſeaſe, and proves extremely hurtful to delicate women. This diſcharge is not always white, but ſometimes pale; yellow, green, or of a blackiſh colour; ſometimes it is ſharp and corroſive; ſometimes foul and fœtid, &c. It is attended with a pale complexion, pain in the ſpine of the back, loſs of appetite,

ſwelling of the feet, &c. It generally proceeds from a relaxed and debilitated ſtate of the body, ariſing from indolence, the exceſſive uſe of tea, coffee, or other weak and watery diet.

To remove this diſeaſe, the patient muſt take as much exerciſe as ſhe can bear without fatigue. Her food muſt be ſolid and nouriſhing, but of eaſy digeſtion; and her drink pretty generous, as red port or claret wine. Theſe may be drank pure, or mixed with water, as the patient inclines. Tea and coffee are to be avoided. I have often known ſtrong broths have an exceeding good effect in this caſe. The patient ought not to lie too long a-bed. When medicine is wanted, we know none preferable to the Jeſuits bark, which, in this caſe, ought always to be taken in ſubſtance.

That period of life at which the *menſes* ceaſe to flow, is likewiſe very critical to the ſex. The ſtoppage of any cuſtomary evacuation, however ſmall, is ſufficient to diſorder the whole frame, and often to deſtroy life itſelf. Hence it comes to paſs that ſo many women either fall into chronic diſorders, or die about this time: Such of them, however, as ſurvive it, without contracting any chronic diſeaſe, often become more healthy and hardy than they were before, and enjoy ſtrength and vigour to a very great age.

If the *menſes* ceaſe all of a ſudden, in women of a full habit, they ought to abate ſomewhat of their uſual quantity of food, eſpecially of the more nouriſhing kind, as fleſh, eggs, &c. They ought likewiſe to take plenty of exerciſe, and to keep the belly open. This may be done by taking, once or twice a-week, a little rhubarb, or an infuſion of hiera-picra in wine or brandy.

It often happens that women of a groſs habit, at this period of life, have ulcerous ſores break

out

out about their ancles, or in other parts of the body. Such ulcers ought to be conſidered as critical, and ſhould either be ſuffered to continue open, or artificial drains ſhould be opened in their ſtead. Women who will needs have ſuch ſores dried up, are often ſoon after ſeized with acute or chronic diſeaſes, of which they die.

Perſons of either ſex ought to be very cautious in drying up ſores which break out towards the decline of life. We would lay it down as a rule, wherever ſuch ſores appear, that before any attempts be made to heal them, an iſſue or ſeton ſhould be ſet in ſome part of the body. Few things bid fairer for preſerving health, or prolonging life, eſpecially in perſons who live full, than an iſſue, or ſome other drain, conſtantly kept open in the decline of life. This is imitating Nature, who often, at this period, endeavours to relieve herſelf by a fiſtula, the hæmorrhoidal flux, &c.

OF PREGNANCY.

Pregnancy is not a diſeaſe; but as it ſubjects women to ſeveral ailments, it may not be improper to point out the methods of preventing or relieving them.

Pregnant women are often afflicted with the heart-burn. The method of treating this complaint has already been pointed out. They are likewiſe, in the more early periods of pregnancy, often haraſſed with ſickneſs and vomiting, eſpecially in the morning. Theſe complaints may generally be relieved by carefully obſerving the directions already given on this ſubject. The head-ach and tooth-ach are alſo very troubleſome ſymptoms

ſymptoms of pregnancy. The former may generally be removed by keeping the belly gently open, by the uſe of prunes, figs, roaſted apples, and ſuch like. When the pain is very violent, bleeding may be neceſſary. For the treatment of the latter, we muſt refer the reader to what was before ſaid on that article.

Every pregnant woman is more or leſs in danger of abortion. This ſhould be guarded againſt with the greateſt care, as it not only weakens the conſtitution, but renders the woman liable to the ſame misfortune afterwards. Abortion may happen at any period of pregnancy, but it is moſt common in the ſecond or third month. Sometimes, however, it happens in the fourth or fifth. If it happen within the firſt month, it is uſually called a falſe conception; if after the ſeventh month, the child may be often kept alive by proper care.

The common cauſes of abortion are, the death of the child; weakneſs or relaxation of the mother; great evacutions, violent motion, raiſing great weights, reaching too high, vomiting, coughing, convulſion-fits; ſtrokes on the belly, falls, fevers, diſagreeble ſmells, exceſs of blood, indolence, high living, or the contrary, violent paſſions or affections of the mind, as fear, grief, &c.

The ſigns of approaching abortion are, a pain in the loins, or about the bottom of the belly; a dull heavy pain in the inſide of the thighs, a ſlight degree of coldneſs or ſhivering, ſickneſs, palpitation of the heart; the breaſts become flat and ſoft, the belly falls, and there is a diſcharge of blood or watery humours from the womb.

To prevent abortion, we would adviſe women of a weak or relaxed habit to uſe ſolid food, avoiding great quantities of tea, and other weak and watery liquors; to riſe early, and go ſoon to bed,

to

to ſhun damp houſes, to take frequent excerciſe in the open air, but to avoid fatigue; and never to go abroad in damp foggy weather, if they can ſhun it. Women of a full habit ought to uſe a ſpare diet, avoiding ſtrong liquors, and every thing that may tend to heat the body, or increaſe the quantity of blood. Their diet ſhould be of an opening nature, conſiſting principally of vegetable ſubſtances. Every woman with child ought to be kept chearful and eaſy in her mind. All violent paſſions hurt the *fœtus*, and endanger an abortion.

When any ſigns of abortion appear, the woman ought to be laid in bed on a mattreſs, with her head low. She ſhould be kept quiet, and her mind ſoothed and comforted. She ought not to be kept too warm, nor to take any thing of a heating nature. Her food ſhould conſiſt of broths, rice and milk, jellies, or gruels with a very little wine in them.

If ſhe be able to bear it, ſhe ſhould loſe at leaſt half a pound of blood from the arm. Her drink ought to be barley-water ſharpened with cream of tartar; or ſhe may take half a dram of powdered nitre, in a cup of water-gruel, every five or ſix hours. If the woman be ſeized with a violent looſeneſs, ſhe ought to drink the decoction of calcined hartſhorn prepared. If ſhe be affected with vomiting, let her take frequently one of the ſaline draughts before recommended.

Sanguine robuſt women, who are liable to miſcarry at a certain time of pregnancy, ought always to be bled a few days before that period arrives. By this means, and obſerving the regimen above preſcribed, they may often eſcape that misfortune.

Though we recommend due care for preventing abortion, we would not be underſtood as reſtraining

ing pregnant women from their uſual exerciſes. This would generally operate the quite contrary way. Want of excerciſe not only relaxes the body, but induces a plethora, or too great a fulneſs of the veſſels, which are the two principal cauſes of abortion.

OF CHILD-BIRTH.

MANY diſeaſes proceed from the want of due care in child-bed. The more hardy part of the ſex are apt to deſpiſe the neceſſary precautions after delivery. They think, when the labour-pains are ended, the danger is over; but in truth it may only then be ſaid to be begun. Nature, if left to herſelf, will ſeldom fail to expel the fœtus; but proper care and management are certainly neceſſary for the recovery of the mother. No doubt, miſchief may be done by too much as well as by too little care. Hence it is, that females who have the greateſt number of attendants in child-bed, generally recover worſt. But this is not peculiar to the ſtate of child-bed. Exceſſive care always defeats its own intention, and is generally more dangerous than none at all.

During actual labour, nothing of a heating nature muſt be given. The woman may now and then take a little panada, and her drink ought to be toaſt and water, or thin groat-gruel. Spirits, wines, cordial waters, and other things, which are given with a view to ſtrengthen the mother, and promote the birth, for the moſt part tend only to increaſe the fever, inflame the womb and

and retard the labour. Beſides, they endanger the woman afterwards, as they often occaſion violent and mortal hæmorrhages, or prediſpoſe her to eruptive and other fevers.

When the labour proves tedious and difficult, to prevent inflammations, it would be proper to bleed, an emollient clyſter ought likewiſe frequently to be adminiſtered; and the patient ſhould ſit over the ſteams of warm water. The paſſage ought to be gently rubbed with a little ſoft pomatum or freſh butter, and cloths wrung out of warm water applied over the belly. If nature ſeem to ſink, and the woman be greatly exhauſted with fatigue, a draught of generous wine, or ſome other cordial, may be given, but not otherwiſe. Theſe directions are ſufficient in natural labours, and in all preternatural caſes, a ſkilful ſurgeon, or man-midwife, ought to be called as ſoon as poſſible.

We cannot help taking notice of that ridiculous cuſtom, which ſtill prevails in ſome country-places, of collecting a number of women together upon ſuch occaſions. Theſe, inſtead of being uſeful, ſerve only to crowd the houſe, and obſtruct the neceſſary attendants. Beſides, they hurt the patient with their noiſe; and often, by their untimely and impertinent advice, do much miſchief.

After delivery, the woman ought to be kept as quiet and eaſy as poſſible. Her food ſhould be light and thin, as gruel, panada, &c. and her drink weak and diluting. To this rule, however, there are ſome exceptions. I have known ſeveral hyſteric women, whoſe ſpirits could not be ſupported in child-bed without ſolid food and generous liquors; to ſuch a glaſs of wine and a bit of chicken muſt be allowed.

Sometimes an exceſſive hæmorrhage, or flooding,

ing, happens after delivery. In this caſe, the patient ſhould be laid with her head low, have ligatures applied above her knees and elbows, and be in all reſpects treated as for an exceſſive flux of the *menſes*. If the flooding prove violent, linen cloths, which have been wrung out of a mixture of equal parts of vinegar and water, ſhould be applied to the belly, the loins, and the thighs: Theſe muſt be changed as they grow dry; and may be diſcontinued as ſoon as the flooding abates.

If there be violent pains after delivery, the patient ought to drink plentifully of warm diluting liquors, as tea with a little ſaffron; or an infuſion of camomile-flowers; and to take ſmall broths, with carroway-ſeeds or a bit of orange-peel in them: an ounce of the oil of ſweet almonds may likewiſe be frequently taken in a cup of any of the above liquors; and if the patient be reſtleſs, a ſpoonful of the ſyrup of poppies may now and then be mixed with a cup of her drink. If ſhe be hot or feveriſh, one of the following powders may be taken in a cup of her uſual drink, every five or ſix hours. Take of crabs-claws prepared half an ounce, purified nitre two drams, ſaffron powdered half a dram, rub them together in a mortar, and divide the whole into eight or nine doſes. When the patient is low ſpirited, or troubled with hyſterical complaints, ſhe ought to take frequently twelve or fifteen drops of the tincture of aſafœtida in a cup of penny-royal tea.

An inflammation of the womb is a dangerous, and not unfrequent diſeaſe after delivery. It is known by pains in the lower part of the belly, which are greatly increaſed upon touching; by the tenſion or tightneſs of the parts; great weakneſs; change of countenance; a conſtant fever, with a weak and hard pulſe; a ſlight *delirium* or raving;

raving; ſometimes inceſſant vomiting; a hiccup; a diſcharge of reddiſh ſtinking ſharp water from the womb; an inclination to go to ſtool; a heat, and ſometimes total ſuppreſſion of urine.

This muſt be treated like other inflammatory diſorders, by bleeding and plentiful dilution. The drink may be thin gruel or barley-water; in a cup of which half a dram of nitre may be diſſolved, and taken three or four times a day. Clyſters of warm water muſt be frequently adminiſtered; and the belly ſhould be fomented by cloths wrung out of warm water, or by applying bladders filled with warm milk and water to it.

A ſuppreſſion of the *lochia*, or uſual diſcharges after delivery, and the milk fever, muſt be treated nearly in the ſame manner as an inflammation of the womb. In all theſe caſes, the ſafeſt courſe is plentiful dilution, gentle evacuations, and fomentations of the parts affected. In the milk-fever, the breaſts may be embrocated with a little warm lint ſeed oil, or the leaves of red cabbage may he applied to them. The child ſhould be often put to the breaſt, or it ſhould be drawn by ſome other perſon.

Nothing would tend more to prevent the milk-fever, than putting the child early to the breaſt. The cuſtom of not allowing children to ſuck for the firſt two or three days, is contrary to nature and common ſenſe, and is very hurtful both to the mother and child Every mother who has milk in her breaſts ought to ſuckle her own child, or to have her breaſts frequently drawn, at leaſt for the firſt month. This would prevent many of the diſeaſes which prove fatal to women in child-bed.

When an inflammation happens in the breaſt, attended with redneſs, hardneſs, and other ſymptoms of ſuppuration, the ſafeſt application is a poultice

poultice of bread and milk, ſoftened with oil or freſh butter. This may be renewed twice a-day, till the tumor be either diſcuſſed or brought to ſuppuration. Afterwards it may be dreſſed with yellow baſilicon, or any other digeſtive ointment. The uſe of repellants, in this caſe, is very dangerous; they often occaſion fevers, and ſometimes cancers: Whereas, a ſuppuration is ſeldom attended with any danger, and has often the moſt ſalutary effects.

When the nipples are fretted or chapt, they may be anointed with a mixture of oil and bees-wax, or a little gum-arabic may be ſprinkled on them. I have ſeen Hungary-water applied to the nipples have a very good effect. Should the complaint prove obſtinate, the nurſe ought to be purged, which generally removes it.

The miliary fever is a diſeaſe very incident to women in child-bed. But as it has been treated of already, we ſhall take no farther notice of it here, than only, with the celebrated Hoffman, to obſerve, that this fever of child-bed women might generally be prevented, if they, during their pregnancy, were regular in their diet, uſed moderate exerciſe, took now and then a gentle laxative of manna, rhubarb, or cream of tartar; not forgetting to bleed in the firſt months, and avoid all ſharp air. When the labour is coming on, it is not to be haſtened with forcing medicines, which inflame the blood and humours, or put them into unnatural commotions. Care ſhould be taken, after the birth, that the natural excretions proceed regularly; and if the pulſe be quick, a little nitrous powder ſhould be given, &c.

We ſhall conclude our obſervations on child-bed women, by recommending it to them, above all things, to beware of cold. Poor women, whoſe

whoſe circumſtances oblige them to quit their bed too ſoon, often contract diſeaſes from cold, of which they never recover. It is pity the poor are not better taken care of in this ſituation. But the better ſort of women run the greateſt hazard from being kept too hot. They are generally kept in a ſort of bagnio for the firſt eight or ten days, and then dreſſed out to ſee company. The danger of this conduct muſt be obvious to every one. The ſuperſtitious cuſtom of obliging women to keep the houſe till they go to church, is likewiſe a very common cauſe of catching cold. All churches are damp, and moſt of them cold; conſequently they are the very worſt places to which a woman can go to make her firſt viſit, after being confined in a warm room for a month. We make this obſervation from experience, having often had occaſion to attend women whoſe diſorders were the effect of cold caught in this way.

As PUERPERAL, or CHILD BED FEVER, though here omitted by our author, is one of the moſt fatal complaints to which women at this period are liable, I ſhall, with a view to ſupply, in ſome meaſure, that omiſſion, offer a few obſervations on this diſeaſe. In doing this, I ſhall endeavour to ſhow, how the diſeaſe may be avoided, by pointing out thoſe cauſes which contribute to its production, or at leaſt how it may be diſtinguiſhed, by enumerating particularly its ſymptoms, ſo that recourſe may be had, as early as poſſible, to the beſt medical aſſiſtance, rather than enter into any diſcuſſions on the nature of the diſeaſe or how it may be cured.

SYMPTOMS.—Puerperal fever uſually takes place on the ſecond, third, or fourth days after delivery; ſometimes later, ſometimes earlier, ac-

cording to circumſtances. It uſually begins its attack with ſome ſlight degree of ſhivering, which by and by gives place to a hot fit. Along with this, the patient is commonly ſeized with ſevere pain of the fore-head, immediately above the eyes. To this ſucceeds a degree of ſoreneſs or uneaſineſs of the belly, ſometimes riſing to an acute pungent pain. This ſometimes occupies one part, ſometimes another, of the abdomen: it in general, however, feels ſore to the touch, and can ſcarcely bear even the weight of the bed-clothes. The pulſe at firſt is rather hard and full, without much increaſe of its frequency. This, however, afterwards increaſes, while the hardneſs and fulneſs are ſucceeded by weakneſs and ſoftneſs. The breathing, though not oppreſſed, is quick, and frequently repeated. Together with theſe, the patient is frequently oppreſſed with great anxiety, and a ſenſe of weight about the præcordia, ſometimes accompanied with ſqueamiſhneſs, nauſea, and vomiting. The belly, for ſome days at firſt, is generally bound; a diarrhœa uſually attends the remainder of this diſeaſe.

CAUSES.—Theſe are in general of two kinds; they are either ſuch as, by their effect on the conſtitution before delivery, diſpoſe it to this diſeaſe, ſuch as indolence, want of exerciſe, impure air, immoderate evacuations of any kind, ſevere labour or fatigue, with poor diet, &c. in ſhort, whatever produces conſiderable debility; or they are ſuch as, in particular conſtitutions, produce the diſeaſe by their immediate operation; ſuch as, immoderate fear, anxiety, grief, naſtineſs, cold, conſtipation, heating-drinks, contagion, &c. By carefully avoiding theſe two ſets of cauſes, this diſeaſe may in general be prevented: a circumſtance of the utmoſt importance, to be deeply impreſſed

preſſed on the public mind, as the diſeaſe is of the moſt dangerous nature, and but too often baffles every aſſiſtance. Next in importance to the belief of the power of avoiding it, is the perſuaſion of the dangerous nature of this diſeaſe; ſo that the earlieſt recourſe may always be had to medical advice.

OF BARRENNESS.

Barrenness may be very properly reckoned among the diſeaſes of females, as few married women who have not children enjoy a good ſtate of health. It may proceed from various cauſes; but we ſhall only take notice of two, viz. high living and relaxation. It is very certain, that high living vitiates the humours, and prevents fecundity. We ſeldom find a barren woman among the labouring poor, while nothing is more common among the rich and affluent. The inhabitants of every country are proliſic in proportion to their poverty; and it would be an eaſy matter to adduce inſtances of women who, by being reduced to live entirely upon a milk and vegetable diet, have conceived and brought forth children, though they never had any before. Would the rich uſe the ſame ſort of food and exerciſe as the better ſort of peaſants, they would ſeldom have cauſe to envy their poor vaſſals and dependents the bleſſing of a numerous and healthy offſpring, while they pine in ſorrow for the want of even a ſingle heir to their extenſive dominions.

Affluence begets indolence, which not only vitiates the humours, but induces a general relaxation of the ſolids; a ſtate highly unfavourable to procreation. As we have the greateſt reaſon to believe, that relaxation is one of the moſt com-

mon cauſes of barrenneſs, we would recommend the following courſe for removing it: Firſt, plenty of exerciſe in the open air; ſecondly, the uſe of the cold bath; and, laſtly, aſtringent medicines. It is well known, that many women who had been long barren, have, by the uſe of the cold bath, not only become mothers, but have afterwards enjoyed a much better ſtate of health. This ſhould induce all barren women, not only to try the cold bath, but to perſiſt in the uſe of it for a long time, otherwiſe it cannot be expected to produce any conſiderable effects.

Though a vegetable diet, plenty of exerciſe, and the cold bath, are the medicines moſt to be relied upon, we ſhall mention one more, which has ſometimes proved effectual, viz. common *allum*. About the third or fourth day of the menſtrual flux, the woman muſt take as much powdered allum at bed-time, in a cup of wine or negus, as will lie upon ſixpence. This muſt be repeated for three or four nights running. If it has not the deſired effect, it may be taken in the ſame manner next time the *menſes* return. I have known ſeveral women who always conceived after taking this medicine, and never without it.

The above obſervations on diet, air, and exerciſe, are applicable to men as well as to women. Dr Cheyne avers, that want of children is oftener the fault of the male than of the female, and ſtrongly recommends a milk and vegetable diet to the former as well as the latter; adding, that his friend Dr Taylor, whom he calls the Milk Doctor of Croyden, had brought ſundry opulent families in his neighbourhood, who had continued ſome years after marriage without progeny, to have ſeveral fine children, by keeping both parents, for a conſiderable time, to a milk and vegetable diet.

DIS-

DISEASES OF CHILDREN.

THE nurſing and management of children having been pretty fully treated of in the firſt part of this book, we ſhall only here take notice of ſuch of their diſeaſes as have not been already mentioned.

RETENTION OF THE MECONIUM.

THE ſtomach and bowels of a new-born infant are filled with a blackiſh-coloured matter, of the conſiſtence of ſyrup, commonly called the *meconium*. This is generally paſſed ſoon after the birth by the mere effort of nature, in which caſe it is not neceſſary to give the infant any kind of medicine. But if it ſhould be retained, or not ſufficiently carried off, it may occaſion wind, gripes, jaundice, reſtleſſneſs, convulſions, &c.

The moſt proper medicine for expelling the meconium is the mother's milk, which is always at firſt of a purgative quality. But if the mother do not give ſuck, or if her milk happen not to be ſufficiently purgative, a little of the ſyrup of pale roſes may be given, or a ſmall quantity of the ſyrup of rhubarb diluted with water, and ſweetened with honey or coarſe ſugar. If theſe

are not at hand, a common ſpoonful of whey, ſweetened with a tea-ſpoonful of honey, may be given.

All kind of oils are to be avoided; they are quite indigeſtible by infants, and tend only to load their ſtomachs and make them ſick.

THE APHTHÆ OR THRUSH.

The aphthæ are little whitiſh ulcers affecting the whole inſide of the mouth, tongue, throat, and ſtomach of infants. Sometimes they reach through the whole inteſtinal canal; in which caſe they are very dangerous, and often put an end to the infant's life.

If the aphthæ be of a pale colour, pellucid, few in number, ſoft, ſuperficial, and fall eaſily off, they are not dangerous; but if opake, yellow, brown, black, thick, or running together, they are bad.

It is generally thought, that the aphthæ owe their origin to acid humours; but we have reaſon to believe that theſe, and ſeveral other eruptive diſeaſes of infants, are, in a great meaſure, owing to too hot a regimen both of the mother and child. It is a rare thing to find a child who is not doſed with wine, punch, cinnamon-waters, or ſome other hot and inflaming liquors, almoſt as ſoon as it is born. It is well known, that theſe will occaſion inflammatory diſorders even in adults: Is it any wonder, then, that they ſhould heat and inflame the tender bodies of infants, and ſet, as it were, the whole conſtitution on a blaze?

The moſt proper medicines for the aphthæ are thoſe of a cooling and gently opening nature. Five grains of rhubarb, and a dram of *magneſia alba*,

alba, may be rubbed together, and divided into ſix doſes, one of which may be given to the child every five or ſix hours. Theſe powders may either be given in the child's food, or a little of the ſyrup of pale roſes, and may be repeated as often as is found neceſſery to keep the belly open.

Many things have been recommended for gargling the mouth and throat in this diſeaſe; but it is not eaſy to apply theſe in very young infants: We would therefore recommend it to the nurſe, to rub the child's mouth frequently with a little borax and honey, or with the following mixture. Take fine honey an ounce, borax a dram, burnt alum half a dram, roſe-water two drams; mix them together. Theſe may be applied with the finger, or by means of a bit of ſoft rag tied to the end of a probe.

OF ACIDITIES.

The food of children being, for the moſt part, of an aceſcent nature, it readily turns ſour upon the ſtomach, eſpecially if the body be any how diſordered. Hence it comes to paſs, that moſt diſeaſes of children are accompanied with evident ſigns of acidity, as green ſtools, gripes, &c. Theſe appearances have induced many to believe, that all the diſeaſes of children were owing to an acid abounding in the ſtomach and bowels; but whoever conſiders the matter attentively, will find, that theſe ſymptoms of acidity are oftener the effect than the cauſe of diſeaſes.

Nature evidently intended that the food of children ſhould be aceſcent; and until the body be diſordered, or the digeſtion hurt, from ſome other cauſe, we will venture to ſay, that the aceſcent quality of their food is ſeldom injurious to

them. Acidity, however, is often a ſymptom of infantile diſorders; and, as it is a very troubleſome one, we ſhall point out the method of relieving it.

When green ſtools, gripes, purgings, &c. ſhew that the bowels abound with an acid, the child ſhould have a little ſmall broth inſtead of milk, with light white bread in it; and ſhould have plenty of exerciſe, in order to promote the digeſtion. It has been cuſtomary in this caſe, to give the pearl-julep, chalk, crabs-eyes, and other teſtaceous powders. Theſe, indeed, by their abſorbent quality, may correct the acidity; but they are attended with this inconveniency, that they are apt to lodge in the bowels, and occaſion a coſtiveneſs, which may prove very hurtful to the infant. For this reaſon, they ſhould never be given, unleſs mixed with purgative medicines; as rhubarb, manna, or ſuch like.

The beſt medicine which we know, in all caſes of acidity, is that fine inſipid powder called *magneſia alba*. It purges, and at the ſame time corrects the acidity; by which means, it not only removes the diſeaſe, but carries off its cauſe. It may be given in any kind of food, from ten grains to a tea-ſpoonful, according to the age of the patient. I have often known it have good effects when given in the following manner. Take of *magneſia alba* two drams, fine rhubarb in powder half a dram, peppermint-water and common water, of each two ounces, as much ſyrup of ſugar as will make it agreeable. Shake the bottle, and give the child a table-ſpoonful three or four times a-day.

When an infant is troubled with gripes, it ought not to be doſed with brandy, ſpiceries, and other hot things, but ſhould have its belly opened with an emollient clyſter, or the medicine mentioned

tioned above; and, at the ſame time, a little brandy may be rubbed on its belly with a warm hand before the fire. I have ſeldom ſeen this fail to eaſe the gripes of infants. It is often more effectual, and always more ſafe, than brandy taken inwardly.

GALLING AND EXCORIATION.

These are very troubleſome to children. They happen chiefly about the groin and wrinkles of the neck, under the arms, behind the ears, and in other parts that are moiſtened by the ſweat or urine.

As theſe complaints are, in a great meaſure, owing to want of cleanlineſs, the moſt effectual means of preventing them are, to waſh the parts frequently with water, to change the linen often, and, in a word, to keep the child in all reſpects thoroughly clean. When this is not ſufficient, the excoriated parts may be ſprinkled with abſorbent or drying powders; ſuch as burnt hartſhorn, tutty, chalk, crabs-claws prepared, &c. Any of theſe may be tied in a rag, and the powder ſhook out on the diſordered places.

When the parts affected are very ſore, and tend to a real ulceration, it will be proper to add a little ſugar of lead to the powders, or to anoint the place with a little camphorated ointment. If the parts be waſhed with ſpring-water, in which a little white vitriol has been diſſolved, it will dry and heal them very powerfully.

STOPPAGE OF THE NOSE

THE noſtrils of infants are often plugged up with a groſs *mucus*, which prevents their breathing freely, and likewiſe renders it difficult for them to ſuck or ſwallow.

Some, in this caſe, order, after a ſuitable purge, two or three grains of white vitriol, diſſolved in half an ounce of marjoram water, and filtered, to be applied now and then to the noſtrils with a linen rag. Wedelius ſays, If two grains of white vitriol, and the ſame quantity of *elaterium*, be diſſolved in half an ounce of marjoram-water, and applied to the noſe, as above directed, that it brings away the *mucus* without ſneezing.

In obſtinate caſes, theſe things may be tried; but we have never found any thing elſe neceſſary, than to rub the noſe at bed-time with a little oil of ſweet almonds, or a bit of freſh butter. This reſolves the filth, and renders the breathing more free.

OF ERUPTIONS.

CHILDREN, while on the breaſt, are ſeldom free from eruptions of one kind or other. Theſe, however, are not often dangerous, and ought never to be ſtopped but with the greateſt caution. They tend to free the bodies of infants from hot and acrid humours, which, if retained, might produce fatal diſorders.

The eruptions of children are chiefly owing to the following cauſes, viz. improper food, and neglect of cleanlineſs. If a child be ſtuffed at all hours

hours with food that his ſtomach is not able to digeſt, ſuch food, not being properly aſſimilated, inſtead of nouriſhing the body, fills it with groſs humours. Theſe muſt either break out in form of eruptions upon the ſkin, or remain in the body, and occaſion fevers and other internal diſorders. That neglect of cleanlineſs is a very general cauſe of eruptive diſorders, muſt be obvious to every one. The children of the poor, and of all who deſpiſe cleanlineſs, are almoſt conſtantly found to ſwarm with vermin, and are generally covered over with the ſcab, itch, and other eruptions.

When eruptions are the effect of improper food, or want of cleanlineſs, a proper attention to theſe alone will generally be ſufficient to remove them. If this ſhould not be the caſe, ſome drying medicines will be neceſſary; but they ſhould never be applied without the greateſt caution. If drying medicines are applied, the belly ought at the ſame time to be kept open; and cold is carefully to be avoided. We know no medicine that is more ſafe for drying up cutaneous eruptions, than ſulphur, provided it be ſparingly uſed. A little of ſulphur may be mixed with the white ointment, or hog's-lard, and the parts affected frequently touched with it.

The moſt obſtinate of all the eruptions incident to children are, the *tinea capitis*, or ſcabbed head, and chilblains. The ſcabbed head is often exceeding difficult to cure; and ſometimes, indeed, the cure proves worſe than the diſeaſe. I have frequently known children ſeized with internal diſorders, of which they died, ſoon after their ſcabbed heads had been healed by the application of drying medicines *. The cure

* I ſome time ago ſaw a very ſtriking inſtance of the danger of ſubſtituting drying medicines in the place of cleanlineſs and wholeſome food.

Being

cure ought always firſt to be attempted by keeping the head very clean, cutting off the hair, combing and bruſhing away the ſcabs, &c. If this be not ſufficient, let the head be ſhaved once a-week, and waſhed daily with ſoap and warm water, or with lime-water. Should theſe fail, a plaſter of black pitch may be applied, in order to pull out the hair by the roots. And if there be proud fleſh, it ſhould be touched with a bit of blue vitriol, or ſprinkled with a little burnt allum. While theſe things are doing, the patient muſt be kept to a regular light diet; his belly ſhould be kept gently open; and cold, as far as poſſible, ought to be avoided. To prevent any bad conſequences from ſtopping this diſcharge, it will be proper, eſpecially in children of a delicate habit, to make an iſſue in the neck or arm, which may be kept open till the patient becomes more ſtrong, and the conſtitution be ſomewhat confirmed.

Chilblains commonly attack children in cold weather. They are generally occaſioned by the feet or hands being kept long wet or cold, and afterwards ſuddenly heated. When children are cold, inſtead of taking exerciſe to warm themſelves gradually, they run to the fire. This occaſions a ſudden rarefaction of the humours, and an infarction of the veſſels; which being often repeated, the veſſels are, at laſt, over diſtended, and forced to give way.

To

Being conſulted for the children of a certain Hoſpital in England, who were grievouſly afflicted with ſcabbed heads, and other cutaneous diſorders, I found, upon inquiry, that the children were fed upon potatoes, and other crude vegetables, through the whole year, and that cleanlineſs was totally neglected. My advice was, to give them more wholeſome food, and to keep them thoroughly clean. This advice, however, was not followed. It was too troubleſome to the ſervants, ſuperintendents, &c. The buſineſs was to be done by medicine; which was accordingly attempted, but had like to have proved fatal to the whole houſe. Fevers and other internal diſorders immediately appeared, and, at length, a putrid dyſentery broke out, which carried off a great many of the children.

To prevent it, violent cold and ſudden heat muſt be equally avoided. When the parts begin to look red, and ſwell, the patient ought to be purged, and to have the affected parts frequently rubbed with muſtard and brandy, or ſomething of a warm nature. They ought likewiſe to be covered with flannel, and kept warm and dry. Some apply warm aſhes betwixt cloths to the ſwelled parts, which frequently help to reduce them. When there is a ſore, it muſt be dreſſed with Turner's cerate, or ſome other drying ointment; as the ointment of tuty, the plaſter of ceruſs, &c. Theſe ſores are indeed troubleſome, but ſeldom dangerous. They generally heal as ſoon as the warm weather ſets in.

OF DIFFICULT BREATHING.

CHILDREN are often ſeized very ſuddenly with a great difficulty of breathing, which, if not quickly relieved, proves mortal. This diſeaſe is known by various names in different parts of the country. In the Eaſt coaſt of Scotland, it is called the *croup*. On the Weſt they call it the *chock* or *ſtuffing*. In ſome parts of England, where I have met with it, the good women call it the *riſing of the lights*. It ſeems to be a ſpecies of *aſthma*, attended with very acute and violent ſymptoms.

This diſeaſe generally prevails in cold and wet ſeaſons. It is moſt common upon the ſea-coaſt, and in low marſhy countries. Children of a groſs and lax habit are moſt liable to it. I have ſometimes known it hereditary. It generally attacks children in the night, after having been much expoſed to damp cold eaſterly winds through the day. Damp houſes, wet feet, thin ſhoes, wet clothes, or any thing that obſtructs the perſpiration, may occaſion this diſeaſe.

It

It is attended with a frequent pulſe, quick and laborious breathing, which is performed with a peculiar kind of croaking noiſe, that may be heard at a conſiderable diſtance. The voice is ſharp and ſhrill, and the face is generally much flushed, though ſometimes it is of a livid colour.

When a child is ſeized with the above ſymptoms, his feet ſhould be put into warm water. He ought likewiſe to be bled, and to have a laxative clyſter adminiſtered as ſoon as poſſible. He ſhould be made to breathe over the ſteams of warm water, or an emollient decoction, and emollient cataplaſms or fomentations may be applied round his neck. If the ſymptoms do not abate, a bliſtering-plaſter muſt be applied round the neck, or betwixt the ſhoulders, and the child may take frequently a table-ſpoonful of the following julep. Take penny-royal water, three ounces, ſyrup of althea and balſamic ſyrup, each one ounce; mix them together.

Some, in this caſe, recommend aſafœtida. It may both be given in form of clyſter, and taken by the mouth. Two drams of aſafœtida may be diſſolved in one ounce of Mindererus's ſpirit, and three ounces of penny-royal water. A table-ſpoonful of this mixture may be given every hour, or oftener if the patient's ſtomach be able to bear it. If the patient cannot be brought to take this medicine, two drams of the aſafœtida may be diſſolved in a common clyſter, and adminiſtered every ſix or eight hours, till the violence of the diſeaſe abates.

To prevent a return of this diſeaſe, all thoſe things which occaſion it muſt be carefully avoided; as wet feet, cold, damp eaſterly winds, &c. Children who have had frequent returns of this diſeaſe, or whoſe conſtitution ſeems to prediſpoſe them to it, ought to have their diet properly regulated; all food that is viſcid or hard of digeſtion, and

and all crude, raw trashy fruits, are to be avoided. They ought likewise to have a drain constantly kept open in some part of their body, by means of a seton or issue. I have sometimes known a Burgundy-pitch plaster, worn continually betwixt the shoulders for several years, have a very happy effect in preventing the return of this dreadful disorder.

OF TEETHING.

Dr Arbuthnot observes, that above a tenth part of infants die in teething, by symptoms proceeding from the irritation of the tender nervous parts of the jaws, occasioning inflammations, fevers, convulsions, gangrenes, &c. These symptoms are, in a great measure, owing to the great delicacy and exquisite sensibility of the nervous system at this time of life. But this natural sensibility of the nerves in infancy is too often increased by an effeminate education. Hence it comes to pass, that children who are delicately brought up, always suffer most in teething, and often fall by convulsive disorders.

About the sixth or seventh month, the teeth generally begin to make their appearance; first the *incisores*, or fore-teeth; next the *canini*, or dog-teeth; and, lastly, the *molares*, or grinders. About the seventh year, there comes a new set; and about the twentieth, the two inner grinders, called *dentes sapientiæ*, the teeth of wisdom.

Children, about the time of cutting their teeth, slaver much, and have generally a looseness, which is no bad sign; but when the teething is difficult, especially when the dog-teeth begin to make their way through the gums, the child has startings in his sleep, tumours of the gums, inquietude, watchings,

watchings, gripes, green ſtools, the thruſh, fever, difficult breathing, convulſions, and epilepſies, which often end in death.

Difficult teething is, in all reſpects, to be treated as an inflammatory diſeaſe. If the belly be bound, it muſt be opened either by emollient clyſters or gentle purgatives; as manna, *magneſia alba*, rhubarb, ſenna, &c. The food ſhould be light, and in ſmall quantity; the drink plentiful, but weak and diluting, as infuſions of balm, or of the lime-tree flowers; to which about a third or fourth part of milk may be added.

If the fever be very high, bleeding will be neceſſary; but this, in very young children, ought always to be ſparingly performed. It is an evacuation which they bear the worſt of any. Purging, vomiting, or ſweating, agree much better with them, and are generally more beneficial. Dr Harris, however, obſerves, that, when an inflammation appears, the phyſician will labour in vain, if the cure be not begun with applying a leech under each ear. If the child be ſeized with convulſion-fits, a bliſtering-plaſter may be applied betwixt the ſhoulders, or one behind each ear.

Dr Sydenham ſays, that in fevers occaſioned by teething, he never could find any remedy ſo effectual as two, three, or four drops of ſpirits of hartſhorn, in a ſpoonful of ſimple water, or other convenient vehicle, given every four hours. The number of doſes may be four, five, or ſix. I have often preſcribed this medicine with ſucceſs, but always found a larger doſe neceſſary. It may be given from five drops to fifteen or twenty, according to the age of the child.

In Scotland, it is very common, when children are cutting their teeth, to put a ſmall Burgundy pitch plaſter between their ſhoulders. This generally caſes the tickling cough which attends teething,

teething, and is by no means an uſeleſs application. When the teeth are bred with difficulty, it ought to be kept on during the whole time of teething. It may be enlarged as occaſion requires, and ought to be renewed, at leaſt, once a-month.

Several things have been recommended for rubbing the gums, as oils, mucilages, &c.; but from theſe much is not to be expected. What we would recommend for this purpoſe is virgin honey. A little of this may be rubbed on with the finger three or four times a-day. Children are generally at this time diſpoſed to chew whatever they get into their hands. For this reaſon they ought never to be without ſomewhat that will yield a little to the preſſure of their gums, as a cruſt of bread, a wax-candle, a bit of liquorice-root, or ſuch like. Theſe are far more proper than coral, ivory, ſilver, or any other impenetrable ſubſtance.

With regard to cutting the gums, we have ſeldom known it of any advantage.* In obſtinate caſes, it ought, however, to be tried; but as it is generally performed by a ſurgeon, we ſhall not ſpend time in deſcribing the operation.

In order to render the teething leſs difficult, parents ought to take care that their children's food be light and wholeſome, and that their nerves be braced by plenty of exerciſe without doors, and the uſe of the cold bath, &c. Were theſe things duly regarded, few children would die of teething.

* If this be the reſult of the author's own particular experience on this head, we muſt obſerve, that it is very different from the general belief of medical men, as well as my own particular experience. Moſt medical people in this country, truſt more to this than to any other remedy, or indeed to all the other remedies for this complaint put together: And I have myſelf ſeen the moſt alarming convulſions removed in an inſtant, by this ſimple operation.

As the limits of this performance will not permit us to treat the diſeaſes of infants at more length, we ſhall only obſerve, that, if properly nurſed, their diſeaſes would be very few, and would ſeldom prove fatal. The nurſe may, for the moſt part, do the buſineſs of the phyſician; but the phyſician can never do that of the nurſe.

The diſeaſes of children are far leſs complicated than thoſe of adults, and conſequently much eaſier underſtood; the method of curing them is likewiſe very ſimple, and cannot readily be miſtaken. In all the acute diſeaſes of children, cool air, diluting liquors, and gentle evacuations, are almoſt the only things needful; and in their chronic diſeaſes, reſtorative diet, free air, and proper exerciſe, are what the cure muſt chiefly depend upon.

CONVULSIONS.

Though convulſions in children be ſeldom a primary diſeaſe, and therefore ſcarcely fall to be noticed in a ſcientific Work, but as a ſymptom of ſome more general diſeaſe, on which they depend; yet, as they occur very frequently in infancy, and eſpecially as they often give great alarm to the friends, they certainly merit a place in a popular Work of this kind, though here omitted by the author.

Convulſions in children may proceed from a variety of different cauſes: I ſhall notice here only a few of the moſt common. They are ſometimes the conſequence of external injuries, as pricks from pins, ſtrait clothes, &c. When convulſions

vulſions occur, therefore, without any other cauſe being obvious, our firſt care ſhould be to remove the clothes, and to examine carefully whether they proceed from any thing of this kind. If they do, they will commonly ſubſide on the cauſe being removed. Should they continue after this, the child may be put into the warm-bath for ſome minutes, and then have one, two, or three drops of laudanum, in proportion to its age and ſtrength.

Convulſions, however, are more frequently the effect of ſome internal ſtimulus, as of acrid food, irritating the tender coats of the ſtomach and inteſtines. In this ſituation, a gentle vomit, of two or three grains, (more or leſs according to the age), of ipecacuan, may be given to clear the ſtomach; and a few grains of magneſia alba, ſhould then be given to clear the bowels.

When convulſions are the conſequence of teething, the moſt effectual remedy is a free inciſion upon the tooth. Should this fail to give immediate relief, recourſe may be had to the warm-bath, or a drop or two of laudanum, as before directed.

Thoſe convulſions that precede the ſmall-pox, meaſles, &c. commonly ſubſide immediately upon the eruption taking place. They are not an unfavourable ſymptom of the diſeaſe that is to follow; nor do they in general require any particular attention. Where they continue longer, or are more ſevere than uſual, the tepid bath, or a bliſter, may be had recourſe to.

OF WATER IN THE HEAD.

As this is not only a frequent, but a fatal diſeaſe among children, though omitted in this edition, by the author. I ſhall offer a few obſervations on it here, chiefly with the view to aſſiſt parents and friends in diſtinguiſhing the diſeaſe, and by putting them on their guard to induce them to have recourſe to medical aſſiſtance as early as poſſible.

SYMPTOMS.—The diſeaſe, though not confined to infancy, attacks in a particular manner ſuch as are under the age of puberty: And of theſe more frequently the younger, than ſuch as are farther advanced. The child at firſt becomes heavy, indolent, neglects his uſual exerciſe, and loſes his appetite; by and by, ſome degree of fever takes place, the pulſe becomes quicker, the ſtrength fails, the child looks puny, and then he complains commonly of violent head-ach, at the ſame time that he is haraſſed with frequent nauſea and vomiting. With theſe ſymptoms the fever uſually goes on to increaſe: The face, from being pale, is now frequently fluſhed; ſometimes, however, this occurs on one cheek only: the eyes cannot bear the light, the patient frequently becomes delirious, and either ſleeps ill, or, when he does fall aſleep, ſoon wakens in a fright.

Theſe are the firſt ſymptoms of this diſeaſe, which are afterwards changed, or varied, as the diſeaſe advances. The pulſe, which was at firſt quick and regular, becomes afterwards irregular and

and ſlow; and again, towards the end of the diſeaſe, regular, but ſo quick as ſcarcely to admit of being counted. The head-ach and vomiting now ceaſe; the pupils become dilated, and the patient, while he ſees objects double, uſually ſquints. The patient becomes now lethargic, and ſometimes one ſide, ſometimes another, is affected with paroxyſms.

METHOD OF CURE.

This diſeaſe, when once fairly formed, has been but ſeldom cured; I have been anxious, therefore, to mark the firſt ſymptoms of its approach, that medical aſſiſtance may be called as early as poſſible; as it is at this period, alone that any benefit is to be expected from that quarter. The remedies at this period that ſeem to promiſe moſt ſucceſs, are bliſtering and bleeding, with the uſe of mercury, internally, as well as externally.

OF SURGERY.

To thoſe who are already acquainted with the extent, as well as difficulty of the ſubject, any attempt to explain to the public the principles of Surgery in a few pages, (to which, from the nature of the preſent Work, it muſt neceſſarily be limited), may at firſt ſight appear either ignorance or preſumption. The attempt, however, may perhaps appear ſomewhat more reaſonable, when it is underſtood to be confined to ſome directions on a few of the more ſimple and common caſes only, where the public have either long ago ventured to take the management on themſelves, or where, from the urgency of the caſe, medical aſſiſtance cannot be procured in time. The queſtion here, then, is not about the propriety of every man becoming his own ſurgeon in general; but only is, ſince there are certain caſes, which the public have long ago taken under their own management, or where profeſſional aſſiſtance cannot be had, whether in ſuch ſituations, even a ſmall degree of information be not preferable to abſolute ignorance?

OF BLEEDING.

Bleeding is ſo univerſally preſcribed, as well as practiſed, by the moſt illiterate and awkward that it might ſeem ſuperfluous to offer any directions on the ſubject, did we not almoſt every day ſee melancholy inſtances of the danger both of the preſcription and of the operation.

With regard to bleeding, it may be obſerved, in general, that it is by much too often practiſed. An unfortunate prejudice prevails among the common people, that almoſt every diſeaſe requires bleeding. Nor is this all; the operation is not confined to thoſe merely who are unwell. It is perhaps uſed ſtill oftener as a preventative, with ſuch as are in perfect health. In both inſtances, the practice, I believe, proceeds in ſome meaſure from a very erroneous idea, that the operation is quite harmleſs, or that, if it do no good, it will at leaſt do no harm. Now, no opinion can be more falſe nor unfounded than this. To ſuppoſe, indeed, that a remedy ſo active as bleeding, the moſt powerful means that we are acquainted with of reducing the ſyſtem, ſhould be uſed either in health or diſeaſe, with impunity, that is, without any effect at all, is perfectly abſurd.

Bleeding is neceſſary in all thoſe fevers that have been called inflammatory, as pleuriſies, rheumatiſms, fevers from cold, &c. In the more violent local inflammations, bleeding alone is to be depended on; as inflammation of the brain, inflammation of the ſtomach, bowels, bladder, &c. It is likewiſe proper, after ſevere injuries of the head, breaſt, belly, or of any of the larger joints, as blows, bruiſes, falls, &c.; or in wounds which penetrate any of the cavities, as the cheſt, the belly, or any of the principal joints. The

ſymptoms that in general indicate bleeding, are a hard, full, frequent pulſe, attended with much heat, thirſt, &c. Bleeding is improper in all low, nervous, hyſterical, or hypochondriac diſeaſes; in ſhort, in all thoſe diſeaſes that are attended with a ſmall, weak, and at the ſame time a frequent pulſe, and with but little heat, thirſt. Though proper in inflammatory diſeaſes of the head, breaſt, or belly, or great joints, it is dangerous to bleed in intermittent fevers; and it is death to bleed in the low fevers ſo frequent in this country, or in putrid ſore throat, in dyſentery, in the latter ſtage of the ſmall pox, &c.

Bleeding is of two kinds, *general* and *topical*. It is called *general*, when, by means of the lancet, we open any conſiderable vein or artery, ſo as to abſtract a conſiderable quantity in a ſhort time. *Topical*, again, is when by means of leeches, or by ſcarifyng and cupping, we draw off more or leſs from the veſſels of the part affected, or from their neighbourhood. The firſt is uſed in all the more violent inflammations, attended with a hard full pulſe, heart, thirſt, &c. The laſt is uſed chiefly in the milder local inflammations, ophthalmias, for inſtance, where there is but little affection of the general ſyſtem, or where, from ſome particular circumſtance, as age, debility, or ſome other diſeaſe, we are afraid of taking away much blood.

Bleeding with the lancet, though daily practiſed by the moſt ignorant and awkward people, is really a nice, as well as a dangerous operation. Indeed, conſidering the frequency of this operation, and what ſort of people are in general, at leaſt in country-places, the operators, it is truly aſtoniſhing that ſo few accidents happen from it; and yet in hoſpitals we very often ſee patients with ananiſm, or with the whole arm ſwelled like a poſt, from awkwardneſs or unſkilfulneſs in the manner

manner of performing this operation or from the coarſeneſs of the lancet. Bleeding with the lancet, therefore, in our opinion, ought never to be practiſed by any but *profeſſional men*, except in theſe caſes of emergency, as in apoplexy, or in violent injuries of the head, breaſt, &c. where the danger from delay is greater than the danger from the operation.

As the practice, however, is too ancient, as well as too general, to be laid aſide at once, I ſhall here offer two cautions, with a view to diminiſh the riſk attending it. In the firſt place, every operator, before opening the vein, ought to examine carefully with his finger, if there be any artery immediately contiguous. When this is the caſe, which is eaſily known by the pulſation, he ought unqueſtionably to take ſome other vein. Secondly, in introducing the lancet, let him take care not to plunge it, as is too commonly done, right downwards, but to introduce it in a ſlanting direction, ſo as to cut the vein horizontally, inſtead of perpendicularly. It is not the ſharpneſs, but the bluntneſs of a much uſed lancet, that makes it plunge too deep.

The quantity of blood to be taken at one time, or the number of times the operation ſhould be repeated, muſt be regulated by the age and ſtrength of the patient, the violence of the diſeaſe, or the effects produced by the operation. In ſome diſeaſes, however, as in peripneumonies, which generally requires repeated bleedings; and ſevere injuries of the head, trunk, or any of the larger joints; if the patient be young, and of tolerable ſtrength, the firſt bleeding ought generally to be a free one, to the extent of a pound, for inſtance, at leaſt. The frequency of the bleedings to be regulated by the effects of this, the ſtate of the diſeaſe, &c. This may often be diſtinguiſhed, by the fætor of the breath, or of the ſtools.

OF INFLAMMATION AND ITS CONSEQUENCES.

As inflammation is not only a troublesome disease of itself, but usually the symptom of most surgical complaints, I shall here offer a few observations on the management of it. These will be confined chiefly to external inflammation.

Symptoms. Inflammation is distinguished by some degree of heat, pain, redness, more or less of swelling, and a throbbing or pulsation of the part. Though at first merely local, yet, after continuing for some time, if the part affected be extensive, it commonly produces some degree of fever, as quick pulse, heat, and thirst.

Consequences. Inflammation may terminate in three different ways, by discussion, suppuration, or mortification.

Discussion. When the redness, swelling, and throbbing of a tumor, instead of continuing, or increasing for some time, soon begin to abate, without symptoms either of suppuration or gangrene, the tumor is said to be discussing. As this is both the speediest and safest termination of inflammation, our endeavours, in the first instance, should always be directed to this end. With this view, the best applications to the part, where the swelling or inflammation is considerable, are a number of leeches, or scarifying and cupping, and afterwards some Gowlard, or a solution of lead, cold; or when this is not at hand, a cold crumb of bread-poultice with vinegar. If there be any considerable degree of fever at the same time, ten or twelve ounces of blood should be taken from the arm; some opening medicine should be administered,

miniſtered, and a low cooling diet muſt be enjoined.

Suppuration. When the pain, ſwelling, and particularly the throbbing, notwithſtanding our endeavours to diſcuſs it, continue to increaſe, along with the ſymptoms of general fever, there is reaſon to expect the tumor will ſuppurate. In this caſe, the applications before recommended to the tumor, as well as all evacuations from the ſyſtem, muſt now be laid aſide. Warm fomentations, or a warm bread-and-milk poultice, frequently renewed, muſt be kept conſtantly applied to the part; while we at the ſame time endeavour to reſtore the ſtrength of the ſyſtem, if it have been weakened by the previous evacuations. Should the ſuppuration advance but ſlowly, it may be promoted by the application of a gum-plaſter to the part. When the matter is fairly formed, which will be known by a remiſſion of the former ſymptoms, particularly of the throbbing pain, and by the tumor now becoming ſoft, and pointing at ſome particular place, where a fluctuation may generally be perceived, if the tumor do not ſoon break of itſelf, it muſt be opened with a lancet.

Mortification. This is the third and the moſt unfortunate termination of inflammation. If the pain and heat of a tumor continue to increaſe, with but little throbbing or pulſation, while ſymptoms of general fever, as quick pulſe, heat, thirſt, &c. continue likewiſe, or even get worſe, mortification will probably enſue. That it has actually taken place, is known from the tumor, inſtead of continuing red, painful, and tenſe, as in the firſt ſtate, or becoming ſoft and pointed, with an evident fluctuation, as in the ſecond, becoming of a dull red, or even of a livid colour,

lour, with a flaccid feel, and ſmall watery veſicles diſperſed over its ſurface, while at the ſame time the pulſe, from being hard and full, becomes weak and feeble, as well as more frequent. The beſt applications to the part, in this ſituation, I believe to be warm dreſſings with turpentine, ſome of the tinctures or balſams, as tincture of myrrh, or bark, ſpirit of wine, &c. Much attention at the ſame time is uſually neceſſary, to ſupport the patient with good nouriſhing diet, and particularly with wine and barks, which muſt be given in ſuch quantities as the patient can bear, or the diſeaſe may require.

OF WOUNDS.

No part of medicine has been more miſtaken, than the treatment and cure of wounds. Mankind in general believe, that certain herbs, ointments, and ſalves, are poſſeſſed of wonderful healing virtues, and imagine that no wound can be cured without the application of them. It is, however, a fact, that no external application whatever contributes towards the cure of a wound, any other way than by keeping the parts ſoft, and defending them from the external air, which may be as effectually done by ſoft lint, as by the moſt pompous applications, while it is exempt from many of the bad conſequences attending them.

The ſame obſervation holds with reſpect to internal applications. Theſe only promote the cure of wounds, in ſo far as they tend to prevent a fever, or to remove any cauſe that might obſtruct

or

or impede the operations of nature. It is nature alone that cures wounds; all that art can do is to remove obſtacles, and to put the parts in ſuch a condition as is the moſt favourable to nature's efforts.

With this ſimple view, we ſhall conſider the treatment of wounds, and endeavour to point out ſuch ſteps as ought to be taken to facilitate their cure.

The firſt thing to be done, when any perſon has received a wound, is to examine whether any foreign body be lodged in it, as wood, ſtone, iron, lead, glaſs, dirt, bits of cloth, &c. Theſe, if it can be eaſily done, ought to be extracted, and the wound cleaned, before any dreſſings be applied. When that cannot be effected with ſafety, on account of the patient's weakneſs, or loſs of blood, &c. they muſt be ſuffered to remain in the wound, and be afterwards extracted when the patient is more able to bear it.

When a wound penetrates into any of the cavities of the body, as the breaſt, the bowels, &c. or where any conſiderable blood-veſſel is cut, a ſkilful ſurgeon ought immediately to be called, otherwiſe the patient may loſe his life. But ſometimes the diſcharge of blood is ſo great, that if it be not ſtopped, the patient may die, even before a ſurgeon, though at no great diſtance, can arrive. In this caſe, ſomething muſt be done by thoſe who are preſent. If the wound be in any of the limbs, the bleeding may generally be ſtopped by applying a tight ligature or bandage round the member, a little above the wound. The beſt method of doing this, is to put a ſtrong broad garter round the part, but ſo ſlack as eaſily to admit a ſmall piece of ſtick to be put under it, which muſt be twiſted in the ſame manner as a country-man does a cart rope, to ſecure his loading, till the bleeding

ing ſtops. Whenever this is the caſe, he muſt take care to twiſt it no longer, as ſtraining too tight might occaſion an inflammation of the parts, and endanger a gangrene.

In parts where this bandage cannot be applied, various other methods may be tried to ſtop the bleeding, as the application of ſtyptics, aſtringents, &c. Cloths dipped in a ſolution of blue vitriol in water, or the *ſtyptic water* of the diſpenſatories, may be applied to the wound. When theſe cannot be obtained, ſtrong ſpirits of wine may be uſed. Some recommend the *agaric* * of the oak as preferable to any of the other ſtyptics; and indeed it deſerves conſiderable encomiums. It is eaſily obtained, and ought to be kept in every family in caſe of accidents. A piece of it muſt be laid upon the wound, and covered with a good deal of lint, above which a bandage muſt be applied ſo tight as to keep it firmly on.

Though ſpirits, tinctures, and hot balſams, may be uſed in order to ſtop the bleeding when it is exceſſive, they are improper at other times. They do not promote, but retard the cure, and often change a ſimple wound into an ulcer. People imagine,

* Dr Tiſſot, in his *Advice to the People*, gives the following directions for gathering, preparing, and applying the agaric.—"Gather in autumn, while the fine weather laſts, the agaric of the oak, which is a kind of fungus or excreſcence iſſuing from the wood of that tree. It conſiſts at firſt of four parts, which preſent themſelves ſucceſſively: 1. The outward rind or ſkin, which may be thrown away. 2. The part immediately under this rind, which is the beſt of all. This is to be beat well with a hammer, till it becomes ſoft and very pliable. This is the only preparation it requires, and a ſlice of it, of a proper ſize, is to be applied directly over the burſting open blood-veſſels. It conſtringes and brings them cloſe together, ſtops the bleeding, and generally falls off at the end of two days. 3. The third part adhering to the ſecond may ſerve to ſtop the bleeding from the ſmaller veſſels; and the fourth and laſt part may be reduced to powder, as conducing to the ſame purpoſe.——That agaric which ſprings from thoſe parts of the tree from whence large boughs have been lopped, is generally reckoned the beſt.

imagine, becauſe hot balſams congeal the blood, and ſeem as it were to ſolder up the wound, that they therefore heal it; but this is only a deception. They may indeed ſtop the flowing blood, by ſearing the mouths of the veſſels; but, by rendering the parts callous, they obſtruct the cure.

In ſlight wounds, which do not penetrate much deeper than the ſkin, the beſt application is a bit of the common black ſticking-plaſter. This keeps the ſides of the wound together, and prevents the air from getting into it, which is all that is neceſſary. When a wound penetrates deep, it is not ſafe to keep its lips quite cloſe; this keeps in the matter, and is apt to make the wound feſter. In this caſe the beſt way is to fill the wound with ſoft lint, commonly called *caddis* *. This, however, muſt not be ſtuffed in too hard, otherwiſe it will do hurt. It may be covered over with a cloth dipped in oil, or ſpread with common wax-plaſter †; and the whole muſt be kept on by a proper bandage.

We ſhall not ſpend time in deſcribing the different bandages that may be proper for wounds in

* This direction, though it may be proper enough in wounds attended with a conſiderable diſcharge of blood, which are ſometimes crammed with lint, and then bandaged firmly, with a view to ſtop the hæmorrhage, is certainly very wrong when applied to *wounds* in *general*. Wherever we have a clear wound, of whatever depth, our firſt care ſhould be, after removing any foreign ſubſtances, and carefully waſhing out the blood, to bring the lips of the wound as neatly and cloſely together as poſſible, and endeavour, by means of a bandage, if not by a ſtitch, to retain them exactly in the ſame ſituation. In this way, we ſhall often ſucceed in healing the wound, by what is called the firſt intention, that is, without the formation of matter, and, as it can do no harm, it ſhould always be attempted.

† The wax-plaſter is made by melting together over a ſlow fire, a pound of yellow wax; white reſin, and mutton ſuet, of each half a pound. This not only ſupplies the place of melilot-plaſter, formerly ſo much in vogue, but makes a very proper application to ſlight wounds, and to large ones after they are nearly heal.

in different parts of the body; common ſenſe will generally ſuggeſt the moſt commodious method of applying a bandage; beſides, deſcriptions of this kind are not eaſily remembered.

The firſt dreſſing ought to continue on for at leaſt two days; after which it may be removed, and freſh lint applied as before. If any part of the firſt dreſſing ſticks ſo cloſe that it cannot be removed with eaſe or ſafety to the patient, it may be allowed to continue, and freſh lint dipped in ſweet oil laid above it. This will ſoften it, ſo as to make it come off eaſily at next dreſſing. Afterwards the wound may be dreſſed every day in the ſame manner till it be quite heal. Thoſe who are fond of ſalves or ointments, may, after the wound is become very ſuperficial, dreſs it twice a-day with the yellow *baſilicum* ointment *; and if fungous, or what is called *proud fleſh*, ſhould riſe in the wound, it may be checked, by mixing with the ointment a little burnt allum or red precipitate.

When a wound is greatly inflamed, the moſt proper application is a poultice of bread and milk, ſoftened with a little ſweet oil or freſh butter. This muſt be applied inſtead of the plaſter, and ſhould be changed two or three times a-day.

If the wound be large, and there is reaſon to fear an inflammation, the patient muſt be kept on a very low diet. He muſt abſtain from fleſh ſtrong liquors, and every thing that is of a heating nature. If he be of a full habit, and has loſt but little blood from the wound, he muſt be bled; and,

* The yellow baſilicum ointment is prepared in the following manner: Take of olive oil an Engliſh pint, yellow wax, yellow reſin, and Burgundy pitch, of each one pound; common turpentine, three ounces. Melt the wax, reſin, and pitch, along with the oil, over a ſlow fire; after taking them from the fire, add the turpentine, and, whilſt the mixture remains hot, ſtrain it.

and, if the ſymptoms be urgent, the operation may be repeated. But when the patient has been greatly weakened by loſs of blood from the wound, it will be dangerous to bleed him, even though a fever ſhould enſue. Nature ſhould never be too far exhauſted. It is always more ſafe to allow her to ſtruggle with the diſeaſe in her own way, than to ſink the patient's ſtrength by exceſſive evacuations.

Wounded perſons ought to be kept very quiet and eaſy. Every thing that ruffles the mind, or moves the paſſions, as love, anger, fear, exceſſive joy, &c. are very hurtful. They ought, above all things, to abſtain from venery. The belly ſhould be kept gently open by laxative clyſters, or by cool vegetable diet, as roaſted apples, ſtewed prunes, boiled ſpinage, &c.

OF BURNS.

In ſlight burns which do not break the ſkin, it is cuſtomary to hold the part near the fire for a competent time, to rub it with ſalt, or to lay a compreſs upon it dipped in ſpirits of wine and brandy. But when the burn has penetrated ſo deep as to bliſter or break the ſkin, it muſt be dreſſed with ſome emollient and gently drying ointment, as the ointment of calamine, commonly

called *Turner's cerate* *. This may be mixed with an equal quantity of freſh olive-oil, ſpread upon a ſoft rag, and applied to the part affected. When this ointment cannot be had, an egg may be beat up with about an equal quantity of the ſweeteſt ſallad oil. This will ſerve very well till a proper ointment can be prepared. When the burning is very deep, after the firſt two or three days, it ſhould be dreſſed with equal parts of yellow *baſilicum* ointment and Turner's cerate, mixed together.

When the burn is violent, or has occaſioned a high degree of inflammation, and there is reaſon to fear a gangrene or mortification will enſue, the ſame means muſt be uſed to prevent it as are recommended in other violent inflammations. The patient, in this caſe, muſt live low, and drink freely of weak diluting liquors. He muſt likewiſe be bled once, and, if occaſion requires, a ſecond time. His belly ſhould be kept open, and, if the burnt parts become livid or black, with other ſymptoms of mortification, it will be neceſſary to bathe them frequently with warm camphorated ſpirits of wine, tincture of myrrh, or other antiſeptics, mixed with a decoction of the bark. In this caſe the bark muſt likewiſe be taken internally.

OF

* Turner's cerate may be prepared by diſſolving half a pound of yellow wax in an Engliſh pint of olive-oil, over a gentle fire. As the mixture cools, and begins to grow ſtiff, half a pound of calamine prepared muſt be ſprinkled into it, keeping conſtantly ſtirring them together till the cerate is grown quite cold.

OF BRUISES.

Bruises are generally productive of worſe conſequences than wounds. The danger from them does not appear immediately, by which means it often happens that they are neglected till paſt cure. It is needleſs to give any definition of a diſeaſe ſo univerſally known; we ſhall therefore proceed to point out the method of treating it.

In ſlight bruiſes it will be ſufficient to bathe the part with a mixture of equal quantities of vinegar and water, and to keep cloths wet with this mixture conſtantly applied to it. This is far more proper than rubbing it with brandy, ſpirits of wine, or other ardent ſpirits, which are commonly uſed in ſuch caſes.

In ſome parts of the country, the peaſants apply to a recent bruiſe, a poultice of freſh cow-dung, with very happy effects.

When a bruiſe is very violent, the patient ought immediately to be bled, and put upon a proper regimen. His food ſhould be light and cool, and his drink weak, and of an opening nature; as whey ſweetened with honey, decoctions of tamarinds, barley, cream-tartar-whey, and ſuch like. The bruiſed part muſt be bathed with vinegar and water, as directed above; and a poultice made by boiling crumbs of bread, elder-flowers, and camomile-flowers, in equal quantities of vinegar and water, applied to it. This poultice is peculiarly proper when a wound is joined to the bruiſe. It may be renewed two or three times a-day.

As the ſtructure of the veſſels is totally deſtroyed by a violent bruiſe, there often enſues a great loſs of ſubſtance, which produces an ulcerous ſore

very difficult to cure. If the bone be affected, the ſore will not heal before an exfoliation takes place, that is, before the diſeaſed part of the bone ſeparates, and comes out through the wound. This is often a very ſlow operation, and may even require ſeveral years to be completed. Hence it happens, that theſe ſores are frequently miſtaken for the king's-evil, and treated as ſuch, though, in fact, they proceed ſolely from the injury which the ſolid parts receive from the blow.

Patients in this ſituation are peſtered with different advices. Every perſon who ſees them propoſes a new remedy, till the ſore is, in a manner, poiſoned with various and oppoſite applications, and is often at length rendered abſolutely incurable. The beſt method of managing ſuch ſores is, to take care that the patient's conſtitution does not ſuffer by confinement, or improper medicine, and to apply nothing to them but ſome ſimple ointment ſpread upon ſoft lint, over which a poultice of bread and milk, with boiled camomile-flowers, or the like, may be put, to nouriſh the part, and keep it ſoft and warm. Nature, thus aſſiſted, will generally in time operate a cure by throwing off the diſeaſed part of the bone, after which the ſore ſoon heals.

OF

OF ULCERS.

Ulcers may be the conſequence of wounds, bruiſes, or tumors, improperly treated; but they generally proceed from an ill ſtate of the humours, or what may be called a bad habit of body.

When this is the caſe, they ought not to be haſtily dried up, otherwiſe it may prove fatal to the patient. Ulcers happen moſt commonly in the decline of life; and perſons who neglect exerciſe, and live full, are moſt liable to them. They might often be prevented, by retrenching ſome part of the ſolid food, or by opening artificial drains, as iſſues, ſetons, or the like.

An ulcer may be known from a wound by its diſcharging a thin watery humour, which is often ſo acrid as to inflame and corrode the ſkin, by the hardneſs and perpendicular ſituation of its ſides or edges, and by the time of its duration, &c.

It requires conſiderable ſkill to be able to judge when an ulcer ought to be healed, and when not. In general, all ulcers which proceed from a bad habit of body ſhould be ſuffered to continue open at leaſt till the conſtitution be ſo far changed by proper regimen, or the uſe of medicine, that they ſeem diſpoſed to heal of their own accord. Ulcers which are the effect of malignant fevers, or other acute diſeaſes, may generally be healed with ſafety after the health has been reſtored for ſome time. The cure ought not, however, to be at-

tempted too ſoon, nor at any time without the uſe of purging medicines and a proper regimen. When wounds or bruiſes have by wrong treatment degenerated into ulcers, if the conſtitution be good, they may generally be healed with ſafety. When ulcers either accompany chronical diſeaſes, or come in their ſtead, they muſt be cautiouſly healed. If an ulcer conduces to the patient's health, it ought never to be healed; but if, on the contrary, it waſtes the ſtrength, and conſumes the patient, by a ſlow fever, it ſhould be healed as ſoon as poſſible.

We would earneſtly recommend a ſtrict attention to theſe particulars, to all who have the misfortune to labour under this diſorder, as we have frequently known people throw away their lives by the want of it, while they were extolling and generouſly rewarding thoſe whom they ought to have looked upon as their murderers.

The moſt proper regimen for promoting the cure of ulcers, is to avoid all ſpices, all ſalted and high-ſeaſoned food, all ſtrong liquors, and to leſſen the uſual quantity of fleſh-meat. The belly ought to be kept gently open by a diet conſiſting chiefly of cooling laxative vegetables, and by drinking butter-milk, or whey ſweetened with honey or the like. The patient ought to be conſtantly chearful, and ſhould take as much exerciſe as he can eaſily bear.

When the bottom and ſides of an ulcer ſeem hard and callous, they may be ſprinkled twice a-day with a little red precipitate of mercury, and afterwards dreſſed with the yellow *baſilicum* ointment. Some chuſe to have the edges of the ulcer ſcarified with a lancet; but this operation ought to be performed by a ſurgeon.

Lime-water has frequently been known to have very happy effects in the cure of obſtinate ulcers.

It

It may be uſed in the ſame manner as directed for the ſtone and gravel.

My late learned and ingenious friend, Dr Whytt, ſtrongly recommends the uſe of a ſolution of the corroſive ſublimate of mercury in brandy, for the cure of obſtinate ill-conditioned ulcers. I have frequently found this medicine, when given according to the Doctor's directions, prove very ſucceſsful; but it ſhould never be adminiſtered without the greateſt care. It is made by diſſolving four grains of the corroſive ſublimate of mercury in eight ounces of the beſt French brandy. The doſe is a table-ſpoonful night and morning; at the ſame time waſhing the ſore twice or thrice a-day with it. In a letter which I had from the Doctor a little before his death, he informs me, "That he obſerved waſhing the ſore thrice a-day with a ſolution of a triple ſtrength was very uſeful." This medicine ought always to be prepared with the greateſt care, and ought never to be adminiſtered but under the eye of ſome perſon of ſkill in phyſic *.

OF

* Ulcers continue perverſe only on the leg; it is there indeed that they are found, and almoſt no where elſe. Ulcers happen there from the dependent poſition of the part, and there are only two ways of preventing the bad effects of that gravitation of the humours which makes ulcers incurable; either the limb muſt be laid in a horizontal poſition on a ſtool on the level of the body, which, by preventing the blood falling down upon the weakened veſſels, gives effect to the corroſive ſublimate, or any other medicine that is uſed for the cure. But if the patient muſt walk, either for health or on account of his buſineſs, the weakened veſſels muſt be ſupported, which is beſt done by plaſters and rollers applied in the following manner, which we conſider as one of the moſt important improvements of modern inquiry: The ulcer muſt firſt of all be very perfectly cleaned; and if it be very large and foul, it ſhould even be ſcraped with a paper-folder, to clear it of all the mucous ſtuff, juſt as you would clean a ſcurfy tongue. Next you take a long ſtrap of that kind of adheſive plaſter which is recommended by Dr Baynton; you lay the middle of the ſtrap upon the back-part of the leg where it is ſound, and holding the two ends in your

OF IMPOSTHUMES OR BOILS.

Boils are generally the efforts of nature, to expel noxious humours out of the body. Their ſuppuration ought, therefore, by all means to be promoted. I do not remember ever to have ſeen one inſtance of the conſtitution being hurt by them, but have often known it greatly mended, eſpecially when care was taken to promote a full and free ſuppuration.

Impoſthumes may proceed from the uſe of traſhy fruits, or any other unwholeſome food, from hunger, exceſſive labour, or the like. They are attended with acute pain, hardneſs, redneſs of the part, and all the ſymptoms of inflammation.

Bleeding and purging will ſometimes diſcuſs theſe tumors at the beginning; but as ſoon as it is evident that matter is collecting, it will be proper to apply a poultice of bread and milk, with a little oil or freſh butter. This may be renewed twice

hands, you brace them round the leg; you draw in the ends of the ſtrap in proportion as you bring them forward. By this drawing you make the two edges of the ſore approach each other, and finally, you make the two ends of the ſtrap croſs each other over the face of the ulcer; you uſe one, two, or three ſtraps, according to the length of the ulcer; you ſupport the ſtraps by a roller, which you begin at the toes, and roll all the way up the leg, gradually and carefully, ſo as to leave no part unſupported; and this manner of bandaging muſt be renewed every morning, as the plaſters and rollers infallibly ſlacken, and the leg ſwells at night. By this proceſs, ſkilfully conducted, ulcers, within the borders of which you could lodge your flattened hand, are reduced to the ſize of a half-crown in a week or ten days, and perfectly cured at laſt.

twice a-day; and if the ſuppuration goes ſlowly on, a raw onion may be cut into ſmall pieces, or bruiſed in a mortar, and ſpread upon the top of the poultice. This will promote the ſuppuration more in one day, than a ſimple poultice will do in three or four.

When the boil turns ſoft, appears of a white or yellowiſh colour, and is quite full of matter, if it does not break of itſelf, it ſhould be opened with a lancet. This operation is nowiſe dangerous, and is very little painful, as the ſkin is very thin, and greatly diſtended. If no other inſtrument be at hand, it may be opened with a large needle; but it is always better to make uſe of a lancet, or ſome inſtrument that will make a pretty large wound, in order that the matter may be diſcharged freely.

After the impoſthume has broke, or been opened, it may be dreſſed twice a-day with yellow *baſilicum* ointment, ſpread upon lint, or a bit of ſoft rag. It will ſtill, however, be proper to keep the poultice applied to it, till ſuch time as the matter be entirely diſcharged. After the matter has been diſcharged, the patient ought to be purged.

When boils return frequently, it ſhews a bad ſtate of the humours, and merits particular attention. The patient ought to be peculiarly attentive to his diet; and if the diſeaſe proceeds from any error in it, it ſhould be changed as ſoon as poſſible. Repeated purges are generally neceſſary in this caſe; and infuſions of the bitter plants, as water-trefoil, camomile-flowers, &c. ought to be drank freely. Thoſe who are able to afford it, ſhould take a courſe of the purging mineral waters.

OF

OF WHITLOWS.

A WHITLOW is a painful tumor appearing near the end of a finger, the humour of which is often ſo ſharp as to corrode the tendons and nerves, and ſometimes even the bone itſelf.

Theſe tumors ſometimes proceed from the puncture of a ſharp body, as a thorn, a pin, a ſplinter, or the like. But their moſt general cauſes, as was formerly obſerved, are ſudden changes from cold to heat, or the contrary. Hence the diſeaſe is very common among milk-maids, eſpecially at that ſeaſon of the year when they go a-milking in a cold nipping froſty morning, and, as ſoon as they get home, plunge their hands into warm water, or hold them near the fire.

The pain of a whitlow is commonly ſo great as to render the patient exceeding reſtleſs. It is attended with an inflammation, and often with an evident pulſation. When the humour lies deep, the inflammation ſpreads over the whole hand, and ſometimes it extends up the arm even to the ſhoulder. The pain, inflammation, and fever, have ſometimes been ſo violent, in this caſe, as to prove mortal.

Many things are recommended for diſcuſſing the inflammation; as bleeding, bliſtering, the patient holding the part in diſtilled vinegar, dipping it frequently in ſcalding-hot water, and ſuch like. Theſe may ſometimes ſucceed at the beginning, but they do no good afterwards. The ſafeſt courſe is to promote the ſuppuration, by applying cataplaſms,

cataplaſms, or poultices of bread and milk, with boiled camomile-flowers. Or, if a more active and ripening poultice be neceſſary, the white-lily root, or a little honey may be added; but theſe ſhould not be applied till there be evident ſigns of a ſuppuration.

When the inflammation and fever run very high, it will be neceſſary to bleed the patient, and to keep him upon a low diet, allowing him to drink freely of diluting liquors.

When the matter is lodged deep, it is not ſafe to wait till the tumor breaks and diſcharges itſelf. In this caſe the matter muſt be let out by making a deep inciſion, otherwiſe it will corrode and deſtroy the bone. This operation ſhould always be performed by a ſurgeon, if one can be had. I have frequently ſeen one bone of the finger loſt by the matter remaining too long in contact with it. Indeed, whenever the inflammation begins very deep, it is hardly poſſible to ſave the bone.

After the tumor has burſt, or been laid open, it may be dreſſed with the yellow *baſilicum* ointment, or ſome other digeſtive, and a poultice applied over it. If proud fleſh appears, it may be kept down by ſprinkling a little burnt allum over it.

If any ſymptoms of a gangrene or mortification appear, as a black, pale, or lived colour of the parts, &c. the patient muſt have immediate recourſe to the bark, a dram of which muſt be taken every two or three hours. The part muſt alſo be ſcarified, and fomented with a ſtrong decoction of the bark or camomile-flowers, to which ſome ſpirit of ſea-ſalt or ſtrong vinegar may be added.

As whitlows and mortifications of the extremities are often the effects of violent cold, we would

would adviſe people who have been expoſed to an exceſſive degree of it, if their hands and feet are greatly benumbed, to waſh them in cold water, or rub them for ſome time with ſnow, and to keep at a diſtance from the fire. This would not only prevent whitlows, but is the only method of reſtoring frozen limbs, and of preventing a mortification from extreme cold.

OF RUPTURES.

This diſeaſe happens moſt frequently to children and old people. Men are greatly more liable to it than women, eſpecially thoſe who are naturally of a weak and relaxed habit. In infants it is generally occaſioned by exceſſive crying, violent coughing, repeated efforts to vomit, &c. In adults it is commonly the effect of blows, violent exertions of the ſtrength, as leaping, carrying great weights, &c. An oily or very moiſt diet, by inducing a general relaxation of the ſolids, is commonly thought to prediſpoſe the body to ruptures.

On the firſt appearance of a rupture in an infant, it ought to be laid upon its back, with its head very low. While in this poſture, if the gut does not return of itſelf, it may eaſily be put up by gentle preſſure. After it is returned, a piece of

ſticking

ſticking plaſter may be applied over the part, and a proper truſs or bandage muſt be conſtantly worn for a conſiderable time. The method of making and applying theſe rupture-bandages for children, is pretty well known. The child muſt, as far as poſſible, be kept from crying, and from all violent motion, till the rupture is quite healed.

In adults, when the gut has been forced down with great violence, or happens from any cauſe to be inflamed, it is often very difficult to return it, and ſometimes quite impracticable, without an operation which it is not our buſineſs to deſcribe. As I have been fortunate enough, however, always to ſucceed in my attempts to return the gut, without having recourſe to any other means than what are in the power of every man, I ſhall very briefly mention the method which I generally purſue. After the patient has been bled, he muſt be laid upon his back, with his head very low, and his breech raiſed high with pillows. In this ſituation flannel cloths wrung out of a decoction of mallows and camomile-flowers, or if theſe are not at hand, of warm water, muſt be applied for a conſiderable time. A clyſter made of this decoction, with a large ſpoonful of butter and a little ſalt, may be afterwards thrown up. If theſe ſhould not prove ſucceſsful, recourſe muſt be had to preſſure. If the tumor be very hard, conſiderable force will be neceſſary; but it is not force alone which ſucceeds here. The operator, at the ſame time that he makes a preſſure with the palms of his hands, muſt with his fingers conduct the gut in by the ſame aperture through which it came out. The manner of doing this can be much eaſier conceived than deſcribed. Should all theſe endeavours prove ineffectual, clyſters of the ſmoke of tobacco muſt be tried. Theſe have been

been often known to ſucceed where every other method failed. An adult, after the gut has been returned, muſt wear a ſteel-bandage. It is needleſs to deſcribe theſe, as they are only to be had from the artiſts who make them. They are generally uneaſy to the wearer for ſome time, but by cuſtom they become quite eaſy. No perſon who has had a rupture after he arrived at man's eſtate, ſhould ever be without one of theſe bandages.

Perſons who have a rupture ought carefully to avoid all violent exerciſe, carrying great weights, leaping, running, and the like. They ſhould likewiſe avoid windy aliment and ſtrong liquors, and ſhould carefully guard againſt catching cold.

OF DISLOCATIONS.

Dislocations are generally occaſioned by falls, blows, or the like. They are always dangerous, and ſometimes, unleſs immediately reduced, they prove fatal. A perſon who has the misfortune, by a fall from his horſe or the like, to diſlocate his neck, is often left to periſh, while it is in the power of every perſon preſent to do all that is neceſſary for his recovery. But people are ſeized with a kind of panic upon theſe occaſions, and are often ſo much afraid of doing wrong, that they do

do nothing at all. This is, in fact, allowing a perſon to die for fear of hurting him.

When the neck is diſlocated, or put out of joint, the patient is immediately deprived of all ſenſe and motion; his countenance ſoon turns bloated and blackiſh; his neck ſwells; and his face is generally turned towards one ſhoulder. He ſhould immediately be laid upon his back on the ground; and the operator muſt place himſelf behind him, in ſuch a manner as to be able to lay hold of his head with both his hands, while he makes a reſiſtance, by placing his knees againſt the patient's ſhoulders. In this poſition, with one hand under the chin, and the other under the hinder-part of the head, he muſt pull with conſiderable force, gently twiſting it at the ſame time, if the face be turned to one ſide, till he perceives that the joint is replaced. This is eaſily known, from the noiſe which the bones generally make upon one another in the very act of reduction, from the patient's beginning ſoon after to breathe, and from the head continuing in its proper poſition, &c. This operation, like many others, is eaſier performed than deſcribed, and requires only common prudence and ſufficient reſolution in the operator. I have known inſtances of its being happily performed even by women, and frequently by men of no medical education.

Though diſlocations of the limbs are leſs dangerous, they ought, nevertheleſs, to be reduced as ſoon as poſſible. When the operation is long delayed, it becomes very difficult, and ſometimes even impracticable. Beſides, when a bone has been diſlocated for a conſiderable time, it can ſeldom be kept in its place after it has been reduced. A mechanical genius, with a very ſlight notion of the ſtructure of the human body, will enable any perſon to reduce a diſlocated bone.

All

All that is neceſſary is, to make a proper extenſion, and, at the ſame time, to puſh the head of the bone towards the ſocket *.

After the bone has been reduced, a roller wet with equal parts of vinegar and water may be applied round the joint. The member ought to be placed in the moſt natural and eaſy poſture, and kept ſo for ſome time, till the parts recover their wonted ſtrength and tone †.

OF

* We intended here to have treated of the various kinds of diſlocations, and to have ſhewn the method of reducing them; but this the limits of our performance will not permit.

† It is chiefly deſirable for a perſon unacquainted with ſurgery, to know the moſt frequent luxations, the ſigns of them, and the way in which they ſhould be reduced; and though many luxations are mentioned, there are three only that are peculiarly frequent. The luxation of the ſhoulder, the luxation of the hip, and the luxation of the elbow.

When a man falls on the back of his head, as in hunting, and lies ſtunned with the blow, becoming at the ſame time black in the face and inſenſible, it is ſuppoſed that he has diſlocated his neck; and it is imagined, eſpecially by country-people, that by placing him upon his breach, and by preſſing againſt his ſhoulders with the knees, and pulling his head, by taking hold on the chin and back-head, and turning it, that the neck is reduced. But it is not ſo. There is no diſlocation. The beſt ſurgeons doubt whether there ever were a diſlocation of the neck. When the ligaments of the bones of the neck are actually torn with the force of the fall, and its bones diſplaced, the man, as we uſually ſay, has broken his neck, and the accident is irrecoverable; the ſpinal marrow is compreſſed; and the man inevitably dies. But in common caſes, the perſon is nearly ſtunned withthe fall, and recovers in due time without this ceremony of twiſting the head to reduce the luxation In ſuch caſes the beſt thing that can be done, is to bleed him in the arm, to daſh ſome cold water on his face and breaſt, as

if

OF BROKEN BONES.

THERE are, in moſt country-villages, ſome perſons who pretend to the art of reducing fractures. Though in general ſuch perſons are very ignorant, yet ſome of them are very ſucceſsful; which evidently

if he were in a faint, and to give him a little hartſhorn and water, or ſpirits and water, as ſoon as he can ſwallow.

When a man diſlocates his ſhoulder, it is in general not by a blow upon the ſhoulder, but by putting out his hand to ſave himſelf from a fall, and then the weight of the body falls all upon the ſhoulder-joint, and it is twiſted out. The ſigns of this diſlocation are, a hollowneſs in the ſhoulder, where the top of the ſhoulder-bone ſhould be; the one ſhoulder is higher, and, as it were, narrower than the other; the perſon's fore-arm is bent, the elbow ſticks out from the body, he cannot raiſe his arm in the ſlighteſt degree; and when the ſurgeon tries to carry his elbow upwards, it gives excruciating pain in the joint.

To put in the ſhoulder, two things are required: *Firſt*, to draw the arm a little; and, 2*dly*, To puſh up the head of the ſhoulder-bone from the arm-pit where it lies. When a ſurgeon has this to do, he knows of various ways of performing it; but when an ordinary perſon tries it, there is but one way that is ſafe and adviſeable. Lay the patient down upon his back on the carpet; ſit down by him, with your haunch touching his haunch; ſet ſome of his friends to hold his body down to the ground; then, having put off your ſhoe, put your heel deep into the arm-pit, take a ſtrong hold of the patient's hand with both yours, then throw yourſelf backward, and pull ſtrongly with your hands to draw out the bone, and at the ſame time puſh with all your ſtrength with your heel, to

dently proves, that a ſmall degree of learning, with a ſufficient ſhare of common ſenſe, will enable a man to be uſeful in this way. We would, however, adviſe people never to truſt ſuch operators

puſh the head of the bone out of the hollow of the armpit up into its ſocket. You muſt uſe all your ſtrength. You can do no poſſible harm, whether the ſhoulder be or be not diſlocated: if you do not find the ſhoulder crack and go into its place, then loſe no time in carrying the perſon to the neareſt ſurgeon; for if a ſhoulder remain out a month, it is difficult to reduce; if it remains out two months, it is impoſſible.

The *thigh-bone* is often diſlocated by falls, by the falling in of quarries, by a horſe falling backwards upon his rider, by any load falling upon the haunch, when the leg is ſtretched out. The thigh-bone is either luxated upwards or downwards; if it be luxated downwards, then the diſlocated leg is longer than the other, the toe is turned out, and the leg is kept ſtraddling away from the body, and is entirely fixed in that lame and aukward poſition.

When the thigh-bone is luxated upwards, which is much more frequent, the round head of the thigh-bone mounts upwards upon the back of the haunch-bone, and the leg is ſhortened; it is not ſlightly ſhortened, ſo as to leave any doubt in the mind even of an ignorant perſon, the whole limb is ſhortened four inches, the heel of the diſlocated leg is higher than the ancle of the ſound one, the toe is turned remarkably inwards, the knee of the diſlocated limb is turned inwards, and lies over the knee of the ſound one, and the whole limb is crooked, ſhort, and perfectly ſtiff and immoveable.

In a country-place, the beſt way of reducing this diſlocation, is to lay the patient on his back in a bed with big and ſtrong poſts. One of the bed-poſts ſhould be ſurrounded with towels, ſo as to make it ſoft, not to hurt him. Then he ſhould be brought down to the foot of the bed. His ſhare-bone ſhould reſt againſt the bed-poſt, three or four hand-towels ſhould be made firm about his knee, and three or four people ſhould pull ſtrongly upon them, while the ſhare-bone and the body are reſiſted by the bed-poſt. In reducing

tors when an expert and ſkilful ſurgeon can be had; but when that is impracticable, they muſt be employed. We ſhall therefore recommend the following hints to their conſideration.

When

reducing this luxation, the ſucceſs in general depends upon the force with which you extend the limb, and not upon any cunning or curious motion for putting in the head of the bone.

When the *elbow* is *diſlocated*, both bones are put out, the arm is remarkably ſhortened; it remains in ſomewhat of a ſtraight poſition, or is a very little bent with the heel, like part of the elbow, ſticking out very far, like the long heel of a dog. This kind of diſlocation is the moſt frequently neglected of all, it is the eaſieſt to reduce, and yet it is the ſeldomeſt reduced, becauſe it is generally imagined that this, like other diſlocations, is to be reduced by extenſion. Thoſe who underſtand the ſtructure of the bones are well aware, that it can be reduced in no other way than by bending the fore-arm upon the arm, without extending it at all. This diſlocation will reſiſt the pulling of ſix or eight aſſiſtants, and will go in at once, with a loud ſnap, when it is dextrouſly bended.

The *wriſt* is no doubt often luxated, but there is ſeldom what is called a ſimple luxation; generally the wriſt is broken as well as diſlocated; and it is this complication of injury that makes ſo many lame and deformed wriſts. If the wriſt be broken, as well as luxated, if you can feel the crepitation, as it is called, or grating of broken bones, eſpecially if the bones be ſo broken that their points protrude through the fleſh, the fracture muſt not be meddled with by an ignorant perſon, but the patient laid in bed, and the hand and arm laid gently out upon a pillow, and kept eaſy by a fomentation, with flannel wrung out of warm water, till the ſurgeon arrive. But when the joint is only luxated, as ſometimes happens, then the bones, or ball of the wriſt, is ſeen projecting either towards the palm, or towards the back of the hand, the hand meanwhile hanging from the arm-bones in a very awkward and unnatural poſture. But as there are in this caſe no pro-

When a large bone is broken, the patient's diet ought, in all reſpects, to be the ſame as that of a perſon in a fever. He ſhould likewiſe be kept quiet and cool, and his belly ſhould be kept gently open, either by emollient clyſters, or, if theſe cannot be conveniently adminiſtered, by food that is of an opening quality, as ſtewed prunes, apples boiled in milk, boiled ſpinage, &c. It ought, however, to be here remarked, that perſons who have been accuſtomed to live high are not all of a ſudden to be reduced to a very low diet. This might have fatal conſequences. There is often a neceſſity of indulging bad habits, in ſome meaſure, even where the nature of the diſeaſe might require a different treatment.

It will generally be neceſſary to bleed the patient after a fracture, eſpecially if he be young, of a full habit, or has, at the ſame time, received any bruiſe or contuſion. This operation ſhould be performed as ſoon after the accident happens as poſſible, and if the patient be very feveriſh, it may be repeated next day. When ſeveral of the

jecting proceſſes to prevent the bones of the wriſt going eaſily back into their place, the luxation can be eaſily reduced, by gently extending the hand, graſping it, drawing it firmly with both hands, while an aſſiſtant holds the arm, and puſhes in the ball of the wriſt with the thumbs.

When joints have been diſlocated, and are immediately and perfectly reduced, they require no bandages. The bone keeps its place by the hold of its muſcles. If the joint continue ſwelled for ſome time, warm fomentations or poultice ſhould be applied to it; but in general it requires cold water to be poured upon it from a tea-kettle every morning, to ſtrengthen it. And if it turns rheumatic, and becomes painful in moiſt weather, as luxated joints are very apt to do, it ſhould be rubbed with ſoap and ſpirits, or opodeldoc, or rubbed well with the fleſh-bruſh, and wrapped up well in flannel or fleecy hoſiery.

the ribs are broken, bleeding is peculiarly neceſſary.

If any of the large bones which ſupport the weight of the body be broken, the patient muſt keep his bed for ſeveral weeks. It is by no means, however, neceſſary that he ſhould lie all this while, as is cuſtomary, upon his back. This ſituation ſinks the ſpirits, galls and frets the patient's ſkin, and renders him very uneaſy. After the ſecond week, he may be gently raiſed up, and may ſit ſeveral hours, ſupported by a bed-chair, or the like, which will greatly relieve him. Great care, however, muſt be taken in raiſing him up, and laying him down, that he exert no ſtrength of his own, otherwiſe the action of the muſcles may pull the bone out of its place.

It is of great importance to keep the patient dry and clean while in this ſituation. By neglecting this, he is often ſo galled and excoriated, that he is forced to keep ſhifting places for eaſe. I have ſometimes known a fractured thigh-bone, after it had lain ſtraight for above a fortnight, diſplaced by this means, and continue bent for life, in ſpite of all that could be done.

Bone-ſetters ought carefully to examine whether the bone be not ſhattered, or broken into a great many pieces. In this caſe it will generally be neceſſary to have the limb taken off, otherwiſe a gangrene or mortification may enſue. The horror which attends the very idea of an amputation often occaſions its being delayed in ſuch caſes till too late. I ſome time ago ſaw a ſhocking inſtance of this in a maſon, who had the misfortune to fall from the third ſtory of a houſe. In one of his legs, which had ſtruck a beam, the bones were ſhattered and ſplit near the ancle, that they felt almoſt like a bag of ſmall ſtones. Some of their ſharp points had likewiſe penetrated the

ſkin. It was adviſed that the leg ſhould immediately be taken off; but to this the patient's friends would not conſent. After taking three or four days to conſider of it, the operation was at laſt determined upon, and was accordingly performed; but, alas! it was in vain. The mortification had already proceeded too far to be ſtopped, and the miſerable patient died in two days.

When a fracture is accompanied with a wound, it muſt be dreſſed in all reſpects as a common wound.

All that art can do towards the cure of a broken bone, is to lay it perfectly ſtraight, and to keep it quite eaſy. All tight bandages do hurt. They had much better be wanting altogether. Great many of the bad conſequences which proceed from fractured bones are owing to tight bandages. This is one of the ways in which the exceſs of art, or rather the abuſe, does more miſchief than would be occaſioned by the want of it. Some of the moſt ſudden cures of broken bones which were ever known, happened when no bandages were applied at all. Some method, however, muſt be taken to keep the member ſteady; but this may be done many ways without bracing it with a tight bandage. We are not, however, againſt the uſe of bandages altogether; it is only the wrong application of them which we find fault with.

In fractures of the ribs, where a bandage cannot be properly uſed, an adheſive plaſter may be applied over the part. The patient in this caſe ought to keep himſelf quite eaſy, avoiding every thing that may occaſion ſneezing, laughing, coughing, or the like. He ought to keep his body in a ſtraight poſture, and ſhould take care that his ſtomach be conſtantly diſtended, by taking frequent-

ly

ly ſome light food, and drinking frequently of weak watery liquors.

The moſt proper external application for a fracture is *oxycrate*, or a mixture of vinegar and water. The bandages ſhould be wet with this at every dreſſing, before they be applied, and the part may be frequently ſprinkled with it.*

OF

* *Bone-ſetting*, like blood-letting, has in moſt country-places become a particular profeſſion of itſelf, under the management of thoſe who are equally ignorant of anatomy and the moſt common principles of ſurgery. We ſhould be aſtoniſhed at the impudence of ſuch *ſelf-taught doctors*, did we not ſee the credulity of the public marching hand in hand along with it. Rather, however, than continue to inveigh againſt a practice which, from the ſanction of time immemorial, as well as the confidence of the public in its favour, cannot at preſent be altogether eradicated, I believe I ſhall do a more acceptable favour to the public, by pointing out to them thoſe caſes which, from the eaſe with which in general they are managed, may ſafely be entruſted to the care of ſuch rude artiſts, and enabling them to diſtinguiſh ſuch from thoſe more important fractures which often require the boldeſt and moſt ſkilful ſurgery, as well as the moſt correct anatomy, to their thorough cure.

In the *firſt* place, then, fractures are always of more difficult management, from their being at the ſame time accompanied with a *correſponding wound* or laceration of the *ſoft parts*. If, along with this external wound, the bone be not ſimply broken in one place, but *ſhattered*, as it were, into a *number* of *different fragments*, the caſe becomes ſtill more difficult and dangerous. This kind of injury occurs moſt frequently from wains or loaded carts paſſing over limbs, or ſtones or other hard ſubſtances falling upon them, while a ſimple fracture is more frequently the conſequence of a fall from ſome height, or merely on level ground. Beſide being accompanied with *wounds of the ſoft parts*, or a number of *ſhattered bones*, fractures become difficult to manage, and often dangerous, from the *ſituation* merely of

OF STRAINS.

STRAINS are often attended with worſe conſequences than broken bones. The reaſon is obvious; they are generally neglected. When a bone is broken, the patient is under the neceſſity of

the *fracture* or the *ſize* of the *bone fractured*. Thus, all fractures that happen at the extremities of any of the bones near the large joints, are attended with more danger from the riſk of the inflammation extending to the joint, than ſuch as take place towards their middle. The ſize of the bone likewiſe adds conſiderably to the danger attending its fracture. Thus, fractures of the thigh-bone, eſpecially towards its neck, are the moſt difficult of all, either to diſtinguiſh or to manage. When both the bones of a limb, too have been broken, the caſe is always more troubleſome than when one only has been injured, becauſe, in this laſt ſituation, the ſound bone ſerves as a ſplint to keep the broken one in its ſituation.

Fractures, therefore, of all theſe deſcriptions, ought never to be entruſted to a common bone-ſetter, where a ſurgeon of tolerable abilities can be had at any moderate diſtance. The laſt circumſtance, the diſtance, and conſequently the expence, frequently operates as a motive with the common people, to give the preference to a bone-ſetter who is at hand, to a ſurgeon of the firſt abilities, who is ſomewhat farther off. Even in this reſpect, however, we believe they are generally miſtaken, as there is much leſs chance of their being overcharged or impoſed upon by a man of character and reſponſibility; beſide, the greater probability of their being ſoon well under his care, as well as more completely cured.

For the benefit of thoſe, however, who having only a ſimple

of keeping it eaſy, becauſe he cannot make uſe of it; but when a joint is only ſtrained, the perſon, finding he can ſtill make a ſhift to move it, is ſorry to loſe his time for ſo trifling an ailment. In this way

ſimple fracture of ſome of the ſmall bones, may chuſe to take the management of it themſelves, or to intruſt it to a common bone-ſetter, we would offer the following hints. Firſt, with reſpect to what has been called the *ſetting*, or replacing of the bone. To thoſe who are unacquainted with anatomy, the beſt direction that can be given for ſetting the bone is, after placing the ſound limb exactly in the ſame poſition, to take care that the broken bone correſpond perfectly with it in figure and length. When a bone has been ſet, it is generally neceſſary to uſe a ſplint and bandages to retain it in its place. One of the beſt ſplints is a bit of common paſteboard, of which two are commonly required for a fracture. The firſt ſhould be of the full length of the limb, and of a breadth nearly equal to one half of it. This, after being wet, to make it aſſume the ſhape of the member, ſhould be placed on the under ſide, and one ſomewhat ſhorter, and conſiderably narrower, ſhould now be placed on the upper ſide; and, while an aſſiſtant retains them in this poſition, the *many-tailed bandage* ſhould be uſed to fix them. This, though it muſt not be applied ſo tight as to give much pain, ſhould yet be ſo firm as to produce ſome ſlight degree of ſwelling in the lower part of the limb. The limb ſhould now be laid on a firm ſmooth pillow, either of hair or wool, to which it ought likewiſe to be fixed by paſſing two or three ſtraps acroſs it, and tying them to the pillow on each ſide. It ſhould then be put into a gently-bending poſition, ſo as to place the different ſets of muſcles as much as poſſible at their eaſe. This, in the leg, is beſt affected by turning the patient towards the broken limb, and then laying it on the outſide, with the knee a little bent, and the foot gently extended. In the arm the ſame intention may be anſwered, by ſuſpending it with the ſplints and bandage, either in a ſling, or in a leather-box made on purpoſe, and tied round the oppoſite ſhoulder. The beſt applications to fractures of this deſcription, where they are attended with much

pain

way he deceives himſelf, and converts into an incurable malady, what might have been removed by only keeping the part eaſy for a few days.

Country-people generally immerſe a ſtrained limb in cold water. This is very proper, provided it be done immediately, and not kept in too long. But the cuſtom of keeping the part immerſed in cold water for many hours together, is certainly dangerous. This relaxes, inſtead of bracing the part, and is more likely to produce a diſeaſe, than remove one.

Wrapping a garter, or ſome other bandage, pretty tight about the ſtrained part, is likewiſe of uſe. It helps to reſtore the proper tone of the veſſels, and prevents the action of the parts from increaſing the diſeaſe. It ſhould not, however, be applied too tight. I have frequently known bleeding near the part, in violent ſtrains, have a very good effect.

But what we would recommend above all things for a ſtrain, is *eaſe*. It is more to be depended upon than any medicine, and ſeldom fails to remove the complaint.

pain and ſwelling, are at firſt a number of leeches, proportioned to the violence of the ſymptoms, and afterwards ſome cold ſaturnine ſolution.

OF CASUALTIES.

As it is often impracticable to obtain even the ſmalleſt degree of medical aſſiſtance in many of thoſe accidents which endanger life, we ſhall conclude with a few obſervations upon ſome of the moſt common and hazardous of them.

OF SUBSTANCES STOPT IN THE GULLET.

The firſt we ſhall name is, *The Stoppage of Subſtances between the Mouth and the Stomach.* Tho' accidents of this kind are unavoidable, yet, generally ſpeaking, they are the effect of careleſſneſs. Children have a ſtrong inclination to put every thing in their mouths which they get hold of. This ought to make nurſes careful in keeping every thing from them that they can ſwallow, which would be hurtful. Even adults are far leſs careful in this reſpect than they ought to be. Nothing ſhould ever be held in the mouth which it would be dangerous to ſwallow, as a fit of coughing, or ſome other accident, may force it over. Notwithſtanding the numberleſs accidents which are daily occaſioned by holding pins in the mouth, many women have their mouths, for the moſt part, full of them through the day, and ſome of them even ſleep with them all night.

When a pin, or any other ſharp body, is ſwallowed, it will generally deſcend into the ſtomach, if

if its head or blunt end goes foremoſt; but if the point goes foremoſt, it is apt to ſtop, and when that happens, every effort to force it down will only ſerve to fix it faſter in. In this caſe, the beſt way is to make the patient vomit, either by tickling his throat with a feather, or giving him a vomit. I have frequently known pins which had ſtuck in the gullet for ſeveral days, brought up by ſwallowing a bit of tough meat tied to a ſtrong thread, and drawing it quickly up again.

All hard or ſharp ſubſtances, which might hurt or wound the bowels, ought, if poſſible, to be diſcharged upwards. Subſtances that will diſſolve in the ſtomach, if they cannot be brought up, may be puſhed down. When a mouthful of ſolid food ſtops in the gullet, it may often be forced up by giving the perſon a blow on the back betwixt the ſhoulders. If this ſhould not ſucceed, the throat may be tickled with the finger or a feather. I lately ſaw a halfpenny, which had ſtuck faſt in the gullet of a boy about eight years old, thrown by only thruſting a finger down his throat *.

OF

* When a ſubſtance ſticks in the gullet, we endeavour to remove it in two different ways. We either try to extract it by the mouth, or, where this fails, we endeavour to puſh it down into the ſtomach. The firſt method being the ſafeſt, ought always to be attempted firſt. This is eſpecially the caſe, when the ſubſtance lodged happens to be a hard ſharp body, as pins, bits of glaſs, or ſharp bones, &c. In this ſituation, as it is of the utmoſt importance to extract the ſubſtance by the mouth, we ſhould, without loſs of time, uſe every effort for that purpoſe. In the firſt place, the patient ought not to be allowed to continue his own efforts, either by retching, or vomiting, too long without aſſiſtance. If he fail to bring it up after a few gentle trials, he ſhould not obſtinately perſevere, as there is but little chance after this of their ſucceeding, while there is

OF SUSPENDED ANIMATION.

UNDER this title, I mean to comprehend all thoſe accidents, which, by a ſudden and violent operation produce a ceſſation of the powers of life, without any material local injury, ſuch as *drowning*,

is much riſk of his either forcing it farther down, or fixing it deeper. Any perſon, therefore, of reſolution enough, who may happen to be preſent, ſhould at once, after taking a firm hold of the head betwixt his left arm and his body, and deſiring him to open his mouth wide, boldly thruſt his two fingers down his throat, till he reach, if poſſible, the ſubſtance; when he may, either by laying hold of it betwixt them, or by putting one finger under it, be able to extract it. As the operation, though a very diſagreeable one, is not attended with any danger, he ought not to be deterred from perſevering by the intreaties, or even the cries and ſtruggles of the patient; where a firſt or ſecond attempt may have failed, a future one may be ſucceſsful. He ſhould therefore perſevere till he be ſatisfied that the ſubſtance is not within reach of his fingers. In this ſituation, if a pair of ſmall crooked forceps or pincers be at hand, they may be uſed with perfect ſafety, and ſometimes perhaps with ſucceſs. They ſhould be introduced down the throat till they touch the ſubſtance; when, being gently opened, the ſubſtance muſt be laid hold off, and extracted. In a caſe ſo urgent as what we are at preſent ſuppoſing, perhaps a common knitting wire, where nothing better is at hand, may be employed with ſucceſs. One extremity which ſhould be perfectly blunt or round, muſt be bent ſomewhat in the form of a fiſhing-hook, with the point turned inward; then, after giving a gentle bend to the handle, to accommodate it to the paſſage, we paſs it down the throat, ſo as, if poſſible, to get beneath the ſubſtance, when we endeavour, by withdrawing it in a direction ſomewhat different from

that

ing, *hanging*, *ſuffocation* from noxious vapours. On a firſt view of the ſubject, theſe accidents appear ſo different from one another, that we do not readily perceive how they can agree in producing one common effect on the human body. A more careful inveſtigation of the ſubject will, I am ſatisfied, convince us that they do. In the *firſt* place, we know, that ſubmerſion under water in animals that reſpire, deſtroys life, by preventing them from receiving a freſh ſupply of air. That air is abſolutely neceſſary to all breathing animals, is a fact ſufficiently known; but not only is air neceſſary, but a conſtant freſh ſupply of pure air, or air that has not been breathed, as we know that air, after being once breathed, becomes unfit for the purpoſes of reſpiration. Upon this principle, then, it is eaſy to ſee how ſubmerſion, by preventing a ſupply of air, muſt neceſſarily induce death. Let us now ſee whether hanging may not act in a ſimilar manner. That hanging produces death by ſtopping reſpiration, is rendered extremely probable, from the manner in which ſuſpenſion takes place. This

that in which it was introduced, to catch the body, and thus make the extraction.

The other method taken notice of for removing ſubſtances that lodge in the gullet, was to puſh them down into the ſtomach. Where the body lodged is neither ſharp-pointed nor poiſonous, nor ſuch as, by the action of the fluids of the ſtomach and inteſtines may become ſo, like ſome of the metals, as copper; this method, if cautiouſly performed, may be uſed with great ſafety. The beſt inſtrument for this purpoſe is a bit of whalebone, or ſmall flexible cane, gently curved, with a ſmall piece of ſponge firmly fixed to the ſmaller extremity; this may be introduced down the throat till it reach the obſtruction, when, by a moderate but firm preſſure, we try to puſh it down to the ſtomach.

This is always by fixing a rope round the throat, and ſuſpending the animal by it. That the weight of the animal, when thus ſuſpended, muſt produce a compreſſion of its wind-pipe, can ſcarcely, I think, be doubted. But we have likewiſe poſitive proof of this. As it has been found by experiment, that if an opening be made into the wind-pipe below where the rope is tied, an animal may be ſuſpended for a conſiderable length of time without injury. This, then, proves, in the cleareſt manner, that the want of freſh air is likewiſe the cauſe of death in hanging. That *noxious airs* act in the ſame manner, ſeems extremely probable from this, that all of them, except atmoſpheric air, and even of this laſt more than two thirds of the whole volume, that is, all except that part which has been called vital air, ſeem to produce preciſely the ſame effect, or almoſt inſtant death, in animals that reſpire them. Now, this is eaſily explained upon the ſuppoſition, that they all act from a property common to all the gaſes, that is, merely by excluding vital air, in other words, that they act merely *negatively*. But it is almoſt impoſſible to conceive, how ſo many different airs ſhould agree in producing any one *poſitive* effect upon the animal body. And it were equally reaſonable to ſuppoſe, that ſubmerſion in different kinds of fluids, as water, milk, wine, &c. produced death each by ſome ſpecific operation, and not by that negative property common to all fluids, of excluding the common air. Having thus, then, ſettled this preliminary point, we now proceed to offer ſome directions for the management of ſuch unfortunate accidents. And here it may be obſerved, that theſe in general apply equally to them all, except it be particularly ſpecified otherwiſe.

Our

Our firſt care, when a perſon has been drowned, is to have the body, the moment it is taken from the water, conveyed to the neareſt houſe, to have a proper degree of heat applied. The body ought to be carried either in a horizontal, or in a ſomewhat erect poſture, not, as is often done, with the head hanging down. The body ſhould inſtantly be ſtripped of the wet clothes, and after being well rubbed with warm towels till it be perfectly dry, it ſhould then be laid in a bed previouſly prepared, with the head ſomewhat elevated, and either wrapt in warm flannel or in blankets.

Heat. Even heat, however neceſſary, muſt be applied with caution, or it will more readily do harm than good. If a high degree of heat be at once applied to a body that has remained long under water, and whoſe temperature has perhaps been ſtill farther reduced by expoſure for ſome time to the intenſe cold of a keen froſty day, it will moſt probably deſtroy at once any little remains of vitality it may ſtill poſſeſs, in the ſame manner as plunging a froſt-bitten limb into warm water brings on inſtant mortification. Two general rules may be given for regulating the degree of heat to be applied. In the *firſt* place, the lower the temperature of the body, or, in other words, the longer it has remained under water, or the greater the cold it has been afterwards expoſed to, ſo much the leſs in proportion ought to be the degree of heat at firſt applied. *2dly*, The degree of heat ought always to be moderate at firſt, and ſhould be gradually increaſed.

Reſpiration. As ſoon as the body has been placed in a ſituation to receive a proper degree of heat, our firſt care muſt be, to endeavour to reſtore the reſpiration. This is indeed our firſt object, and the other only, as it were, accidental,

Various

Various methods have been propoſed, as well as uſed, for effecting this purpoſe. The moſt common method has been, for an aſſiſtant, after applying his mouth to one of the noſtrils, or to the mouth of the ſubject, to blow ſtrongly with his lungs, till he inflate the cheſt. This, however, is generally both a diſagreeable and not an eaſy operation. Wherever a pair of bellows can be had, they ought therefore to be uſed in preference. The beſt way of uſing them is with a tube, fitted at one end to receive the muzzle of the bellows, and at the other adapted to the ſize of the noſtril. Where this tube is awanting, however, the muzzle of the bellows muſt juſt be introduced into one of the noſtrils; and while the other noſtril, together with the mouth, are firmly compreſſed by an aſſiſtant, air muſt now be blown forcibly into the lungs of the ſubject, till the cheſt be diſtended. When this is obſerved to take place, the preſſure ſhould be removed from the mouth and noſtrils, and we ſhould endeavour, by gently compreſſing the cheſt, to aſſiſt in expelling the air again. This proceſs ſhould be continued either till natural reſpiration be reſtored, or till there be no longer any hopes of recovery. As a general direction on this head, it may be obſerved, that inſtances of final ſucceſs are not wanting, after three or four hours continuance of the uſual methods for recovery. This ſhould encourage us to perſevere in our endeavours for at leaſt three or four hours in every inſtance.

Friction.—After *heat* and *artificial reſpiration*, friction is perhaps one of the moſt powerful means of exciting the ſyſtem. It ſhould therefore be begun as ſoon as the body is in a ſituation where it can be properly applied. Like other ſtimulants, however, it requires to be cautiouſly managed.

It ought always to be uſed very gently at firſt, and increaſed gradually afterwards, in proportion to the return of heat or other ſymptoms of animation. The beſt method of applying friction is by means of a fleſh-bruſh or hair-cloth. Where theſe cannot be had, a bit of flannel or woollen cloth will anſwer the ſame purpoſe. To increaſe the effect of theſe ſtill farther, ſome ſtimulating ſubſtances, as alcohol or ſpirit of hartſhorn, may be applied at the ſame time along with the friction to the part.

Internal Stimulants.—Beſide being applied externally, ſtimulants may likewiſe be uſed internally. In this laſt way, they may be applied to different parts of the body, as the *ſtomach*, the *inteſtines*, *inſide* of the *noſtrils*, &c. For the purpoſe of conveying them into the ſtomach, an elaſtic tube, with a ſyringe or gum-bottle, is requiſite. The beſt ſtimulants for this purpoſe, are warm wine, with a little cinnamon or nutmeg, ardent ſpirits diluted, ether, volatile alkali, &c. Theſe, however, like other ſtimuli, muſt be ſparingly adminiſtered at firſt. The ſtimulants applied to the inteſtines are, irritating injections of different kinds; among which tobacco-ſmoke has been conſidered as one of the moſt powerful. For my own part, however, I ſhould be inclined to prefer any ſimple irritating injection, as an infuſion of ſenna, or a ſolution of Glauber's ſalts, to a ſubſtance ſo highly narcotic and poiſonous as tobacco-ſmoke. Or if we ſhould wiſh for one ſtill more irritating, we may beat up half an ounce or an ounce of turpentine with ſome yolk of egg, which forms perhaps as ſtimulating an injection as we can employ. Beſide being applied to the ſtomach and inteſtines, ſtimulants may alſo be applied to the internal noſtrils, the tongue, palate, &c. and, as theſe parts poſſeſs much ſenſibility, with

with conſiderable effect. The ſubſtances that are commonly uſed to ſtimulate the noſtrils, are volatile ſalts or ſpirit of hartſhorn. Strong ſnuff may likewiſe be blown up the noſtrils for the ſame purpoſe. With a view to irritate the tongue and palate, ſome ſtrongly irritating ſubſtance, as muſtard or horſe-radiſh, may be rubbed on them.

Beſide the remedies juſt mentioned for the recovery of ſuſpended animation, ſome others are uſually recommended, which therefore require to be noticed here. Of theſe the firſt we ſhall mention is *blood-letting*. Though this remedy has been frequently adminiſtered in almoſt every variety of ſuſpended animation, it continues ſtill on as equivocal a footing as at firſt; the number of thoſe who condemn its uſe being at leaſt equal to the number of thoſe who approve of it. Now, where a remedy has been ſo often uſed as bleeding in caſes of ſuſpended animation, without any ſuch deciſive advantage as to ſtamp a value on it, this of itſelf appears to be ground enough for rejecting it as uſeleſs. But this is not all; for if we may allowed to conjecture on a ſubject where experience has hitherto afforded no poſitive concluſion, ſcarcely any remedy can be more inconſiſtent with the general plan of cure, which is to ſtimulate, or more oppoſite to the moſt generally approved remedies, viz. ſtimulants of different kinds, than blood-letting. Thus, then, both from theory and practice, this remedy ſhould, in our opinion, be laid entirely aſide, not merely as uſeleſs, but as being in ſome meaſure dangerous.

The only other remedy I ſhall notice here, is *electricity*. This remedy cannot be objected to on the ſame principle as the laſt, as inconſiſtent with the general plan of cure, or incompatible with the other remedies employed. On the contrary, it is perhaps one of the moſt powerful ſtimuli that can be ap-

plied to the animal fibre. From this very cauſe, however, the principal danger here is to be apprehended. It is too powerful, as well as unmanageable, to be employed in general with advantage, or even with ſafety. It ought, therefore, never to be had recourſe to but under the moſt ſkilful management, and even then only after the more gentle ſtimuli have failed.

Theſe obſervations on *ſuſpended animation* from *drowning*, apply with equal force to the *ſuſpenſion of animation* from *hanging*, or from *noxious vapours*. In this laſt ſituation, when the body ſtill continues warm, and reſpiration has been ſuſpended only for a few ſeconds perhaps, the body, inſtead of being carried in and laid on a bed, ought inſtantly to be carried out into the freſh air. This of itſelf will frequently be ſufficient to reſtore the patient to life; but if it ſhould fail, the other means already recommended muſt inſtantly be employed. One of the moſt powerful remedies in this caſe, where it can be procured, will probably be found in the inhalation of *pure or vital air*. This air, indeed, ought certainly to be preferred to common air in every caſe of ſuſpended animation, provided a proceſs for procuring it, ſufficiently eaſy and expeditious to be generally uſed, could be any how contrived. Though a ſuſpenſion of the vital powers be moſt generally induced by the cauſes firſt enumerated, yet the ſame effect is not unfrequently the conſequence of ſome other powers, as cold, lightning, a profuſe diſcharge of blood, convulſions, &c. Of theſe I mean to offer a few obſervations on ſuch as require any peculiarity in their method of treatment.

Suſpenſion of the vital powers from cold.—Cold, it is well known, applied to the animal body to a certain extent, or, to ſpeak more philoſophically, the

the ſubtraction of a certain proportion of the matter of heat from the animal body, produces abſolute death. When the degree of heat ſubtracted is not ſufficient to produce death, it may induce a ſuſpenſion of the vital powers, which, without aſſiſtance, would terminate in death. The chief peculiarity in the mode of treatment required here, reſpects the degree of heat that ought to be applied to the body. This ſhould be regulated by the external heat of the body, or the degree of cold to which it may have been expoſed, as aſcertained, if poſſible, with a thermometer, and ought to exceed this at moſt but two or three degrees at firſt. Where a traveller, for inſtance, loſing his road among ſnow, or perhaps ſmothered with the drift, has been expoſed all night, or for any conſiderable length of time, to the cold of an atmoſphere a good deal under freezing, and has been taken up apparently dead, the beſt thing to be done in this ſituation, is to convey the body inſtantly to ſome ſheltered place, or at leaſt ſome apartment without a fire, and to have it well rubbed in the firſt place all over with ſnow. It may after this be conveyed to ſome apartment with a ſmall fire, but at a great diſtance from it, where the frictions may be renewed with flannels, and the other remedies already mentioned had recourſe to; only taking care that the heat, as well as the other ſtimuli employed, be applied in a very gentle and gradual manner.

Froſt-bitten limbs.—When treating on this ſubject, it may not be improper to take notice of another effect of cold, which, if not ſo dangerous as the former, is at leaſt much more frequent. People, in this country at leaſt, except from ſome accident or misfortune, are ſeldom expoſed to ſevere cold long enough to have the vital powers entirely ſuſpended. It often happens, however, that

particular parts, as the extremities where the circulation is more languid and the heat leſs, have their vital powers ſo far interrupted, as to be what we call *numbed* or *froſt-bitten*. Sometimes this injury is irreparable, and the part unavoidably falls into gangrene and mortification. This commonly proceeds from the intenſity of the cold, or the length of its application, on the one hand, or from the debility of the patient, or of the part expoſed, on the other. At other times, however, the accident may be completely got the better of by the uſe of proper means. In every ſuch ſituation, the principal danger to be apprehended is from the too ſudden application of heat. The part, therefore, muſt neither be held near the fire, nor have any thing warm applied to it. The beſt application at firſt to the part, is to rub it well with ſnow; or where this cannot be had, it may be dipped for ſome time in water about the freezing point. It ſhould afterwards be gently rubbed till it be dry, but muſt neither be brought near the fire, nor have any thing heating applied to it. Where farther application to the part may be neceſſary, ſome cold ſaturnine ſolution, or a crumb-of-bread poultice with vinegar, may be uſed.

SUSPENDED ANIMATION FROM PROFUSE BLEEDING.

A PROFUSE diſcharge of blood, from whatever cauſe, it is well known, often proves at once fatal; not unfrequently, however, it induces a previous ſtate of ſyncope, in which, indeed, the patient ſeems to all appearance dead; he is perfectly inſenſible to all external impreſſions, and neither pulſe nor reſpiration are in the ſlighteſt degree to be diſtinguiſhed. In this ſituation, however, we not

not unfrequently have it in our power, by the uſe of proper means, to reſtore the ſuſpended animation. For this purpoſe, the firſt thing to be done is, to take care to prevent, if poſſible, all farther evacuation of blood. This will be moſt effectually done by ſecuring the veſſels with a ligature, wherever their ſituation is ſuch as to admit of its application. Where this is impracticable, we may ſometimes, by the proper application of a tourniquet, or a compreſs, be able to command the hæmorrhage. This point once ſecured, we immediately proceed to the means for reſtoring the ſuſpended animation. The body ought to be placed in a horizontal poſition, or with the head ſomewhat lower than the reſt of the body. Water, as cold as can be procured, ſhould then be daſhed repeatedly over the whole body. Cold here probably acts in two ways: *1ſt*, By that general ſhock or concuſſion which it gives the nervous ſyſtem, it may excite or rouſe the body; and, *2dly*, By producing a contraction of the veſſels of the ſurface, it may propel the blood to the heart, and thus excite it to action. Beſides this, artificial reſpiration, frictions, and the other ſtimuli already recommended, are equally beneficial and neceſſary in the preſent ſituation.

SUSPENDED ANIMATION FROM LIGHTNING, CONVULSIONS.

These caſes are to be conducted on the general principles already laid down for the management of ſuſpended animation from drowning; and as I have nothing particular to offer in the treatment of either, I decline to take any farther notice of them at preſent.

PERSONS who have the misfortune to fall into the water are often given up for dead, when it is certain they might, by proper care, be recovered. The great intention which ſhould be kept in view is, to reſtore the natural *warmth*, and renew the *circulation* and *breathing*. Though cold is by no means the cauſe of the perſon's death, yet it will prove an effectual obſtacle to his recovery. For this reaſon, after ſtripping him of his wet clothes, if he had any on when the accident happened, his body muſt be ſtrongly rubbed for a conſiderable time with coarſe linen cloths as warm as they can be made. As ſoon as a bed can be got ready and well heated, he may be laid in it, and the rubbing ſtill continued. Warm cloths ſhould be laid to his ſtomach and bowels, and hot bricks or bottles filled with warm water, to the ſoles of his feet. He ſhould likewiſe be bled. The moſt proper part for this operation is in the jugular vein, both becauſe it is moſt likely to bleed, and affords the moſt ſudden relief to the head.

In order to renew the breathing, a ſtrong perſon may blow his own breath into the patient's mouth with all the force he can; or what will ſucceed better, the ſmoke of tobacco may be blown into the lungs, by means of a pipe or funnel. I have known a pig drowned and reſtored to life two or three times ſucceſſively, by blowing air into its mouth with a pair of bellows. It will likewiſe be proper to throw up the ſmoke of tobacco into the inteſtines, in form of a clyſter, by means of a proper pipe. Strong volatile ſalts ought alſo to be applied to the noſe, or ſpirits of hartſhorn, burnt feathers, &c. The noſe ought likewiſe to be tickled with a feather dipped in volatile ſpirits,

and

and warm ſpirits of wine ſhould be rubbed upon the temples, pit of the ſtomach, &c.

If theſe do not ſucceed, the perſon may be put into a warm bath, or laid among warm aſhes. Dr Tiſſot mentions an inſtance of a girl who was reſtored to life, after being taken out of the water to all appearance dead, by laying her naked body upon hot or warm aſhes; by covering her with others equally hot; by putting a bonnet round her head, with a ſtocking round her neck ſtuffed with the ſame, and heaping coverings over all.

The ſame method muſt be purſued for the recovery of perſons ſtrangled, as for thoſe who are drowned. Such as have the misfortune to be ſtunned by a fall, a blow, or the like, muſt alſo be treated nearly upon the ſame principles. Every method muſt be taken to keep up the genial warmth, and to reſtore the vital functions. Nor ought we to deſpair too ſoon of ſucceſs. I have been happy enough to recover a perſon who was taken up for dead by a fall from a horſe, after ſix hours endeavours, during the greater part of which time he hardly ſhewed any ſigns of life.

Nothing is more certain than that life, when ſeemingly loſt, might often be reſtored by perſiſting for a ſufficient time in the uſe of proper means; and that many of thoſe unhappy perſons who periſh by accidents, are really loſt for want of due care. Surely all the laws of religion and humanity call upon us to do every thing in our power to ſave the lives of our fellow-men. Who would not chuſe to be the happy inſtrument of preſerving an uſeful member of ſociety, and perhaps of preventing the ruin of an innocent family?

OF

OF COLD-BATHING.

This ſubject, though entirely omitted in the original Work, is certainly well entitled to find a place in a New Edition, not only from its importance in many caſes as a very active and powerful remedy, but alſo from its being almoſt univerſally uſed without any previous medical advice. Unfortunately a prejudice prevails very generally in reſpect of the cold bath, ſimilar to what has already been taken notice of with regard to bloodletting. From its being ſo univerſally uſed, and ſeldom attended with any immediate or very obvious effects, people fooliſhly imagine, that it muſt be an innocent remedy; and that, if it do no good, as they ſay, it will at leaſt do no harm.

This kind of argument, however frequent, is certainly very childiſh, and, as it may be productive of the worſt conſequences, ought to be univerſally exploded. No remedy, it may be obſerved, that poſſeſſes active powers of any kind upon the human body is, or indeed can be, in any ſituation, perfectly innocent, that is, do neither good nor hurt. The very power of any remedy to produce a beneficial effect upon the ſyſtem, neceſſarily implies the power of doing harm under a change of circumſtances; and theſe two powers, it is farther to be obſerved, are always in exact proportion the one to the other; the greater the power to do good, the greater alſo the power to do evil. So that to ſay of any remedy, it is perfectly innocent, or that it can do no harm,

harm, is only ſaying in other words, it is perfectly uſeleſs.

But beſide this error originating from falſe reaſoning, there is likewiſe here a miſtake in point of fact. The effects of cold-bathing, good as well as bad, it is true, are commonly ſlow, and thus often eſcape obſervation; they are not, however, on that account the leſs real. The greateſt changes, as is well known, are often produced upon the conſtitution by means the moſt imperceptible, in the ſame manner as the moſt deciſive effect on the appearance is produced by a courſe of years, though the alteration of a day or a month entirely eſcapes obſervation. But even the ſenſible effects of the cold bath are not always ſo ſlow in ſhowing themſelves. Nor are inſtances awanting, and theſe not a few, of its being attended with the moſt obvious as well as fatal conſequences. It becomes therefore an object of importance, to point out the effects of this uſeful remedy, and to diſtinguiſh ſuch diſeaſes and conſtitutions, where it may be uſed with ſafety and advantage, from thoſe where its uſe might produce the moſt dangerous effects.

The firſt and moſt obvious effect of immerſion in cold water, is to diminiſh the frequency of the pulſe, and in general to lower the actions of the ſyſtem. The ſkin is corrugated, the body becomes pale and ſhrinks, eſpecially towards the extremities, and the perſon feels chilly and cold. Theſe ſymptoms continue for a longer or ſhorter time, according to the ſtrength or vigour of the perſon, the previous force of the circulation, and the degree of cold poſſeſſed by the water in which the immerſion takes place. In general, however, they ſoon give place to others, which mark a very different and oppoſite affection of the ſyſtem. The perſon, after continuing for ſome time

time in the water, and more certainly ſtill on coming out, feels a kind of glow gradually diffuſing itſelf over his whole body, firſt over the trunk, and then the extremities. The body becomes full and plump, the ſkin ſmooth and of a lively red colour, and all the marks of an increaſed and vigorous circulation, with a full ſtrong pulſe, now actually take place.

It is not intended to enter here into any diſcuſſion on the much-agitated queſtion of the operation of cold in general, or of the cold bath in particular, upon the living body; or whether cold acts as a *ſedative* or a *ſtimulus*. Such a diſcuſſion in a Work of this kind, intended merely for practical obſervations, would certainly be improper. The author would only obſerve in a few words, that ſince cold, when applied in a certain degree to the human body, is univerſally allowed to be *ſedative*, and heat, in a certain degree, univerſally allowed to be *ſtimulating*. And ſince cold is now underſtood to be merely a negative quality, or in other words, only an inferior degree of heat, the queſtion, in his opinion, reſpects *words* rather than *things*; and when once the advocates for theſe ſeemingly oppoſite doctrines, ſhall have once fairly defined their terms, what they underſtand by cold on the one hand, and heat on the other, or diſtinctly marked their line of ſeparation, they will probably find themſelves nearer to an agreement of opinion than they imagined.

However this diſpute reſpecting the operation of cold may be ſettled, it appears to me, that the cold-bath, or, in other words, immerſion in water of the medium temperature of our atmoſphere, is, in the firſt inſtance, always more or leſs directly ſedative. This ſedative effect is particularly to be obſerved where the immerſion is gradual, and where the difference of temperature betwixt the patient

patient and the water is not very conſiderable. This, however, is ſoon ſucceeded by its ſtimulant operation, which, on the contrary, is in proportion to the ſuddenneſs of the immerſion, and the temperature of the patient above the water. When theſe circumſtances take place to any conſiderable degree, the ſedative power of cold is ſcarcely to be perceived, or is almoſt inſtantaneous, and is immediately followed by its ſtimulant or tonic power. As this, therefore, is the only permanent effect of the cold bath, as the other is merely temporary, in many caſes almoſt inſtantaneous, it alone deſerves our attention, in conſidering the application of this remedy to the various diſeaſes or prediſpoſitions of the human body.

As the cold bath is one of the moſt powerful ſtrengthening remedies with which we are acquainted, it is peculiarly ſerviceable in all the caſes of *mere debility*, which ſucceed a convaleſcence from any of the more violent diſeaſes, as well as in thoſe *cahexies* or depraved habits of body, which uſually lay the foundation of the diſeaſes that are called chronic. Wherever the body has been debilitated, either by previous diſeaſe, exceſs, or intemperance of any kind, or merely by want of exerciſe, from ſedentary employments, or the like, in all theſe ſituations, the cold bath, when properly managed, is a moſt valuable remedy. Nor is it confined in its action, as might be ſuppoſed, to the external parts of the body, where it is more immediately applied; it has likewiſe a powerful effect upon the internal. It improves the appetite, and ſtrengthens digeſtion; hence, its ſingular utility in all ſorts of *ſtomachic complaints*. It gives tone and vigour to the action of the heart and arteries; and hence its utility in thoſe caſes of *debility* that are attended

attended with languid circulation and cold extremities. In all thoſe caſes, however, where the debility is conſiderable, it requires to be uſed with caution. In particular, it ſhould not be uſed either where the perſon is chilly, or after much fatigue; in ſuch caſes it is found ſafeſt after moderate exerciſe, ſuch as to quicken the circulation a little, without fatiguing the patient.

In *ſcrophula* and *rickets*, the cold bath is one of the moſt powerful remedies with which we are acquainted. In the advanced ſtages of theſe complaints, this no doubt, as well as every other remedy, frequently fails; when employed early in thoſe diſeaſes, it is however often of ſingular efficacy. Nor is its efficacy in theſe complaints confined to its operation on them after their commencement. It is perhaps ſtill more uſeful as a preventive than a remedy; and where the cold bath has been carefully adminiſtered during infancy and childhood, theſe diſeaſes but ſeldom make their appearance, unleſs under other circumſtances highly favourable to their production.

The cold bath likewiſe proves uſeful in moſt of thoſe diſeaſes commonly called *nervous*, as in *hyſterical*, *hypochondriacal* complaints, &c.; in ſhort, in all thoſe diſeaſes that depend on debility, or a particular irritability of conſtitution.

In that ſpecies of low contagious fever, uſually called the nervous, or, when attended with particular ſymptoms, the putrid, where the heat is conſiderably above the natural ſtandard of health, the cold-bath, or the effuſion of cold water over the body, has lately been found a moſt powerful means of diminiſhing the heat of the body, as well as reducing the frequency of the pulſe, and not unfrequently of ſtopping altogether the progreſs of the fever. For this purpoſe, however, it ſhould be uſed early in the diſeaſe, and only in the exacerbation

cerbation or paroxyſm of the fever, and when the heat of the body is conſiderably above natural. As this remedy, however, can only be uſed with ſafety under the direction and eye of a medical practitioner, I ſhall ſay nothing farther of it in this place.

Beſide theſe diſeaſes already enumerated, the cold bath proves uſeful in a variety of others, either by itſelf or combined with other remedies. In *incipient dropſies*, before the ſyſtem be too much debilitated, it often proves of ſingular ſervice, combined with other tonic medicines, as bark, ſteel, &c. Nor is it leſs uſeful in that *chronic* ſtate of *rheumatiſm*, that often takes place after the inflammatory ſymptoms of the firſt ſtage have gone off. Wherever ſtrengthening remedies, in ſhort, are required, the cold-bath may generally, either by itſelf or with others of the ſame claſs, be employed with much advantage.

The beneficial effects of the cold bath are not confined to ſuch merely as labour under diſeaſe. Its almoſt univerſal introduction into the nurſery, in this country at leaſt, may be ranked among the great improvements of modern times in the rearing and management of children. It will not, it is true, ſupply the place of freſh air, exerciſe, proper food, &c. but, in conjunction with theſe, it certainly has a powerful effect in ſtrengthening the ſyſtem, and fortifying it againſt the attacks of many diſeaſes, as well as the various accidents of life. It ſhould not be limited, however, in its uſe to the nurſery, but ſhould be continued during the whole period of childhood and adoleſcence. This becomes eſpecially neceſſary where children are brought up, for the moſt part, in large towns and cities, as it contributes, in ſome meaſure, to counteract the bad effects ariſing, particularly at this period of life,

life, from the want of freſh air, plenty of exerciſe, &c. as well as thoſe more pernicious conſequences that proceed from early diſſipation and premature indulgences.

To the indolent and ſedentary of every deſcription, to all thoſe whoſe ſituation in life, or whoſe occupation, either does not require, or perhaps entirely precludes from, the full benefit of freſh air and exerciſe, and therefore to a great part of the inhabitants of large cities, who, at the ſame time that they live luxurioufly, ſeldom beſtow the neceſſary attention on recreation and exerciſe, as well as the inhabitants of manufacturing towns, whoſe occupations prevent them, even if they had the inclination; to all ſuch, the cold bath is of the utmoſt ſervice. It braces up the ſoft and relaxed ſolids, ſtrengthens the weak nerves, promotes digeſtion and the different ſecretions, and communicates a new tone and vigour to the whole ſyſtem.

As moſt females are, either from their way of life or their occupations, more ſubjected to theſe cauſes of debility, and of courſe to the diſeaſes thence ariſing, ſo to them, in proportion, the uſe of the cold bath is perhaps of ſtill more importance than to the other ſex. This is particularly true, in reſpect of females of better condition, and ſuch as reſide commonly in cities, whoſe inactivity and want of exerciſe require, in a ſpecial manner, the ſtimulating effects of the cold bath.

If cold-bathing, however, be thus powerful as a remedy in certain diſeaſes, and thus beneficial in its effects on certain conſtitutions, it is no leſs dangerous, as well as pernicious, in other diſeaſes, and on other conſtitutions. Theſe, therefore, as far as the limits of this undertaking will permit, are now to be pointed out.

In the firſt place, then, the cold bath is highly dangerous

dangerous in all *inflammatory diſeaſes*, where the pulſe is hard and full, as well as frequent. Hence it ought not to be uſed in thoſe febrile diſeaſes that are attended with local inflammation, as pleuriſy, acute rheumatiſm, &c. The benefit derived, however, from cold applications to the part affected, in caſes of local inflammation, as well as from the general expoſure of the body to cold, in ſome of the eruptive diſeaſes, as ſmall-pox, would ſeem to point out theſe as exceptions at leaſt to the general rule, if indeed they do not abſolutely contradict it *.

In all *catarrhal complaints*, or in *complaints* of the *cheſt*, as well as in confirmed *conſumption* of the *lungs*, the uſe of the cold bath, though even here it has been recommended, is attended with the utmoſt danger. In all theſe complaints where the circulation is already too rapid, and where the lungs are commonly loaded with blood, any farther accumulation of blood upon this delicate organ muſt be extremely dangerous. That this is the immediate effect of the cold bath, however, can ſcarcely be denied. By contracting every where the veſſels on the ſurface, that are more immediatcly expoſed to its action, it muſt neceſſarily throw a larger quantity of blood on the internal parts, and eſpecially on the lungs, which,

* No ſubject, perhaps, in medicine, preſents greater difficulties than an attempt to explain the operation of cold on the human body, either in a ſtate of health or diſeaſe. This difficulty, however, ſeems greatly increaſed by the inaccurate manner in which obſervations on this ſubject are uſually made, (commonly without a thermometer), as well as by the want of preciſion in the uſe of the term *cold*. From the accuracy and ingenuity of Dr Currie, whoſe attention is now turned to this ſubject, and who has already aſcertained the utility of the cold bath in nervous fever, we ſhall anxiouſly expect farther information.

from the delicacy of their ſtructure, are leſs capable of reſiſtance. Beſides, the balance eſtabliſhed between the general circulation in the reſt of the body, and the particular circulation through the lungs, throws the quantity that is taken out of the circulation of the former entirely upon the latter. Hence ſpitting of blood, and other affections of the lungs, from the increaſed circulation, have ſometimes been the immediate conſequence of immerſion in cold water.

It muſt be confeſſed, however, that in ſome caſes of what may be called *habitual catarrh*, and which have frequently been miſtaken for an incipient conſumption, the cold bath has unqueſtionably proved ſerviceable. As this diſeaſe commonly takes place in weak habits, probably from the want of a free perſpiration by the ſkin, in conſequence of the weaker action of the heart and arteries, and where, of courſe, a greater quantity of the circulating fluids is thrown upon the lungs; ſo the cold bath, by its general ſtrengthening effect on the ſyſtem at large, and eſpecially by its powerful operation on the ſkin and the cutaneous veſſels, often proves, in this ſituation, an effectual remedy. This diſeaſe, however, it muſt be obſerved, ought carefully to be diſtinguiſhed from true conſumption, which not only uſually occurs at an earlier period of life, but likewiſe in conſtitutions marked by what has been called the phlogiſtic or inflammatory diatheſis; a habit very different, and almoſt oppoſite to that which commonly accompanies the former.

Beſide being hurtful, as we have juſt ſeen, in many *diſeaſes*, the cold bath is likewiſe injurious in particular *conſtitutions* and *prediſpoſitions*. Where the habit of the body is hard and meagre, and the ſolids already too firm and denſe, with an apparently ſmall proportion of fluids, the cold bath,

bath, inſtead of promiſing benefit, is likely, by ſtill farther increaſing the firmneſs and denſity of the body and the rigidity of the habit, to do harm. Hence, in what is called the *melancholic temperament*, where the habit is dry and meagre, and the ſolids firm and denſe, the hair and eyes uſually dark, &c. this remedy has a tendency to produce thoſe diſeaſes to which this habit is particularly diſpoſed, as melancholy, the hypochondriacal affections, &c. In this ſituation, the *tepid* or the *warm bath* might, from its relaxing effects, be uſed with more proſpect of advantage.

It is chiefly in an oppoſite ſtate of body, or what has been called the *ſanguine temperament*, that the cold bath proves beneficial. This temperament is diſtinguiſhed by a fine ſkin, a ruddy complexion, light hair and eyes, with a ſoft and ſucculent habit of body, commonly after a certain period of life diſpoſed to obeſity. In this temperament, the cold bath, by its ſtrengthening and tonic powers, is often extremely ſerviceable; at the ſame time it requires, in particular caſes, to be uſed with great caution. Whenever this habit is attended with conſiderable plethora or fulneſs of the veſſels, to which it is naturally diſpoſed, and eſpecially when, along with this general fulneſs of the ſyſtem, there is at the ſame time a particular fulneſs of the blood-veſſels of the head, as indicated by the bulk of that organ, the turgeſcency of the veſſels, or the ſhortneſs of the neck, &c. or of thoſe of the lungs, as indicated by the ſmallneſs of the cheſt, the increaſed frequency of breathing from exerciſe, &c.; in both theſe ſituations, the cold bath ought either not to be employed at all, or if it be abſolutely neceſſary for ſome other complaint, it ought to be uſed only under the care and direction of a well-informed medical practitioner, as its uſe is always attended with

more or leſs hazard, in proportion to the extent of the prediſpoſition.

The uſe of the cold bath is likewiſe not without danger in infirm and gouty habits, eſpecially towards the time when a paroxyſm of this diſeaſe is expected; as, by preventing a regular attack on the extremities, it may throw the diſeaſe on ſome of the vital parts, and thus prove fatal. And it may here be obſerved with regard to the uſe of this remedy in general, that it is commonly ſafer, as well as more effectual, in the diſeaſes and prediſpoſitions of young people, where the conſtitution ſtill retains its ſtrength and vigour, than in thoſe of advanced life, where the ſyſtem in general is not only leſs vigorous, and therefore leſs able to co-operate with the remedy, but where there is always more danger of other diſeaſes or prediſpoſitions being already formed, in which it might be hurtful.

Nor ought the *manner* of uſing ſo powerful a remedy as the cold bath to be neglected. From want of attention to this circumſtance, not only the benefit that might otherwiſe have been expected from it, has not been derived, but many diſeaſes induced, as well as ſome valuable lives loſt.

Going into the cold bath warm, or after being heated in the ſmalleſt degree with exerciſe, has long been conſidered as the height of imprudence. It has therefore been cuſtomary, in this ſituation, to delay going in, perhaps after the clothes had been thrown off, till the body were perfectly cool. This, it muſt be obſerved, however, is a more dangerous practice than even the former. When the body is only warmed with exerciſe, and neither fatigued nor under profuſe perſpiration, the cold bath may be uſed not only with perfect ſafety, but with the utmoſt propriety. In this ſituation, indeed, the ſhock which it gives the conſtitution on the

the firſt immerſion is more powerful than where the temperature of the body is previouſly reduced nearer to that of the water, by expoſure to cold air, reſt, or otherwiſe. But even this ſhock, which is of itſelf highly beneficial in moſt of thoſe complaints for which the cold bath is commonly uſed, by exciting and rouſing the ſyſtem, has a powerful effect in haſtening as well as increaſing that returning *glow* of the ſyſtem which depends on its re-action; while, on the contrary, if the body be cold and chilly before immerſion, and eſpecially where this ſucceeds to a ſtate of heat, the ſhock, and of courſe the benefit, is not only in a great meaſure loſt, but, from the weaker re-action of the ſyſtem, its returning heat and glow are leſs conſiderable, as well as more uncertain. Hence ariſes a rule of great importance, eſpecially in weakly delicate conſtitutions, *not to go into the cold bath when cold and chilly*, but rather after being *warmed* a little with *moderate exerciſe*, that they may thus with more certainty enſure that re-action or glow of the ſyſtem on coming out. The exerciſe, however, muſt not be carried the length of inducing fatigue or a conſiderable perſpiration; as in either of theſe ſituations immerſion in cold water is attended with the utmoſt danger.

Another general rule reſpecting the uſe of the cold bath is, that the immerſion be *ſudden*, and not *long continued*. The ſuddenneſs of the immerſion, by increaſing the violence of the ſhock, produces a more powerful re-action of the whole ſyſtem, particularly of the heart and arteries; while its ſhort continuance, as it removes the firſt or ſedative effect of the cold bath, gives additional vigour to its ſecond or ſtimulant operation, at the ſame time, by leſſening the effect which habit would otherwiſe produce, it enſures the longer continuance of this beneficial operation.

Attention to theſe directions is peculiarly neceſſary in weak conſtitutions.

It has long been a queſtion among medical people, as well as others, What was the moſt proper time of uſing the cold bath? ſome preferring the morning, others the mid-day, and ſome the evening. Were I to give my own opinion on this ſubject, I would alledge, that provided it be not after much fatigue, or under conſiderable perſpiration, or after a full meal, a perſon in tolerable health and vigour may uſe the cold bath at any time of day that may be moſt convenient for him in other reſpects. With weakly and delicate people, however, the time of uſing the cold bath is a matter of more importance; and to all ſuch I would unqueſtionably recommend the morning, in preference to every other. The ſooner after repoſe the cold bath is uſed, in this ſituation, ſo much the better, as the ſyſtem is then more ſtrong and vigorous, and therefore fitter to withſtand the ſhock of the bath, as well as to produce that proper re-action on which its beneficial effects, in a great meaſure, depend.

Though theſe obſervations on the uſe of the cold bath chiefly regard *ſea-bathing*, yet they apply almoſt equally to the uſe of the *freſh-water bath*. It has been alledged indeed, that ſalt water poſſeſſed powers very different, in this reſpect, from freſh water, and ſome phyſicians have not even ſcrupled to ſpeak of its ſuperior *gravity*, &c. That an impregnation with ſalt may communicate to water properties different from thoſe of ſimple water, it were perhaps raſh altogether to deny, as experience and obſervation ſeem to ſhew that immerſion in ſalt water may be continued for a length of time with leſs danger than in freſh. This has been attributed with ſome probability to the greater ſtimulating power of the former. However this may apply to immerſion

ſion in water when continued for any conſiderable time, I hold, it may be almoſt, or indeed altogether overlooked, when the immerſion is practiſed in the way here recommended, that is, when it is *ſudden* and almoſt *inſtantaneous*. In this ſituation, it is not from the particular qualities of the water, as impregnated with ſalt or otherwiſe, that we are to look for advantage, it is ſolely from the *degree* of *cold*, or the *ſuddenneſs* of its application, or, in other words, from the powerful ſhock which, in conſequence of that, it communicates to the whole ſyſtem. In this reſpect, however, ſea-water poſſeſſes ſome advantage over river-water, that it is generally of a more uniform temperature, and neither ſo liable to be affected by the heats of ſummer nor the cold of winter. Upon the whole, then, though *ſea-bathing* ſhould perhaps be preferred to bathing in *freſh water*, when both are equally convenient; yet wherever, from ſituation or other circumſtances, the uſe of the former becomes impracticable, the latter may commonly ſupply its place with nearly the ſame benefit.

The *ſhower-bath*, from the ſudden and inſtantaneous manner in which it is applied, and as it may be uſed of water impregnated with ſalt, poſſeſſes all the advantages of the others, while it has one advantage peculiar to itſelf, that it may be employed at all times and ſeaſons with equal ſafety, and almoſt in every ſituation. The only attention required here, reſpects the degree of temperature that ſhould be given to the water employed. This ought to vary with the object in view, from its uſe. In general, however, when its *tonic* and *ſtrengthening* effects are wanted, it ſhould not be uſed of a temperature above 60° or 62° of Fahrenheit; or if it may ſometimes be neceſſary, in caſes of great debility, to uſe it of a higher

temperature at firſt, it may be afterwards gradually reduced to this, and even to a lower temperature. The ſafeſt range for the cold bath in general is from 40° to 60°.

OF DRINKING THE MINERAL WATERS.

As this is a claſs of remedies of conſiderable diverſity, and at the ſame time poſſeſſed of extenſive powers over the human body, it has been thought proper to add a few obſervations here reſpecting their variety, and the means of diſtinguiſhing them, and to point out the chief of thoſe complaints where they may be uſed with ſafety and advantage. This becomes ſo much the more neceſſary, as patients very commonly have recourſe to their uſe without any medical advice, and merely on their own judgement of the nature of the diſeaſe, as well as the remedy. Whatever, therefore, may contribute in any degree to remove prejudice or to correct opinion, on queſtions of ſuch moment as reſpect life or health, cannot be deemed foreign to the object of the preſent undertaking.

Mineral Waters are ſuch as from their impregnation with foreign matters, are capable of producing effects on the human body different from thoſe of common water. As this could not fail to be obſerved even in the earlieſt ages of ſociety, it muſt have drawn the attention of medical people almoſt as ſoon as medicine became a diſtinct ſcience, and engaged them in inquiries into the nature

nature of thoſe qualities on which this peculiarity depended. Though aſſured of this, however, from reaſoning as well as from fact, we at the ſame time know, that no diſtinct or accurate knowledge was procured on this ſubject, till towards the middle of the laſt century, and that it is within the æra of the *preſent* only that Chemiſtry has lent her *magic wand* to unvail thoſe myſteries which ſeemed to be for ever excluded from human obſervation.

Mineral waters may be arranged into four great claſſes, according to the ſubſtances which they contain: *Gaſeous* or *acidulated waters*, *ſaline* or *ſalt waters*, *ſulphurous waters*, and *ferruginous waters*.

OF GASEOUS WATERS.

Gaſeous waters have long been known to be impregnated with an air or gas; though the particular nature of this gas has been but lately diſcovered. It is now aſcertained to be that particular ſpecies of air, denominated by Dr Black *fixed air*, and which, from its acid properties, and the nature of its compoſition, has ſince been called *carbonic acid*. Theſe waters are diſtinguiſhed by their ſour and poignant taſte, by the air-bubbles which they conſtantly emit, particularly when ſhaken, and by the facility with which they boil. They redden the tincture of turnſole, precipitate lime water, &c. Theſe waters, however, never contain this acid ſingly in a pure or ſimple ſtate, but always combined with ſome other ſubſtances, as ſome of the alkalies, iron, &c.; and it is only when they contain it in exceſs, or in an unſaturated ſtate, that they exhibit all the properties above enumerated. But as it is chiefly on thoſe other ſubſtances which they contain, or at leaſt

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on their combination with theſe by means of the carbonic acid, that their medicinal virtues depend, they come naturally to be conſidered, in this reſpect, under ſome of the other claſſes to be treated of afterwards. I therefore ſay nothing farther of them here.

OF SALINE OR SALT WATERS.

The name of *ſaline* or *ſalt* waters is confined to thoſe merely that contain this principle in ſufficient quantity to produce a ſenſible effect upon the human body. They are diſtinguiſhed by their general ſaline taſte, diverſified however according to the nature of the particular ſalt which they contain. The ſalts moſt generally found in theſe waters, are ſulphate of magneſia, or Epſom ſalt; ſulphate of ſoda, or Glauber's ſalt; muriate of ſoda, or marine ſalt; muriate of lime, or calcarous marine ſalt; muriate of magneſia, or marine ſalt with baſe of magneſia.

Theſe waters are merely natural ſolutions of the different neutral ſalts, and differ from thoſe prepared in our laboratories only in this, that they ſcarcely ever contain any of the ſalts in a pure or ſeparate ſtate, but always combined, ſometimes to the extent of three, four, or even five, with one another in the ſame menſtruum. Their properties, therefore, it might be ſuppoſed, as depending upon the number of theſe ſalts, and likewiſe upon their different proportions, (for they are as different in reſpect of the quantity as the number of the ſalts which they contain), would vary in a great meaſure with theſe. Theſe waters, however, we find, have moſt of them nearly the ſame properties, and they differ leſs in reſpect of the *mode* than the *ſtrength* of their action. Thus, it may be obſerved in general, that moſtly all of them prove more or leſs

leſs purgative, and that they increaſe the diſcharges by the ſkin or the kidneys, in proportion to their doſe, and the temperature of the patient. When taken in conſiderable quantity at a time, they ſcarcely ever fail to prove purgative; in ſmaller doſes, if combined with exerciſe in the open air, or if their action be promoted by external heat or warm clothes, they commonly act as diaphoretics; while, if they be taken in ſmall doſes, at the ſame time that the body is kept cool, and without motion, they will more generally paſs off by the kidneys, or act as diuretics.

Saline waters are to be found in great abundance in moſt countries; for, beſide that prodigious collection of ſalt waters which is denominated ſea, and which is ſo univerſally diffuſed over our globe, there are few mineral waters that do not contain more or leſs of a ſaline matter. Thus moſt of the ſulphureous or ferruginous waters are likewiſe impregnated with ſalts. But as theſe are to be conſidered under the next two claſſes, I ſhall here only offer one or two obſervations on the ſalt waters ſtrictly ſo called, that is, thoſe whoſe virtues depend on their ſaline impregnation, and I ſhall take *ſea-water* as an example, both as being moſt generally diffuſed, and in moſt frequent uſe, and likewiſe becauſe moſt of the other ſalt waters differ from this only in containing more or leſs of ſome of the other purging neutral ſalts, which ſeems to affect the *degree* rather than the *manner* of their operation.

Sea-water, in addition to that ſalt ſo generally known, and uſed under the name of common ſalt, and which it contains in greater or leſs quantity, in proportion to the latitude of the place, (for the nearer to the equator, the greater the quantity of this ſalt), likewiſe contains a conſiderable proportion

tion of an *Epſom* or *bitter purging ſalt*, and ſome calcareous earth.

The *external* application of this water has been already noticed under the former article of Sea-bathing; it is, however, ſometimes uſed in a more partial manner, as an application to ſcrophulous ſwellings and ſores, old ulcers, and in ſome inveterate cutaneous diſeaſes, which have been called, improperly I believe, *ſcorbutic*. In theſe caſes, along with its external application, it has commonly been uſed at the ſame time internally, and often with the beſt ſucceſs. It generally requires, however, to be continued for a great length of time, to obtain all the benefit from it which its uſe is capable of adminiſtering.

When taken *internally* in conſiderable quantity, ſea-water acts as a purgative. If taken in moderation, however, it is not attended with the debilitating effects that commonly ariſe from the uſe of moſt other purgatives. While it ſtimulates the ſtomach and inteſtines, it at the ſame time improves the appetite, and promotes digeſtion; it increaſes the different ſecretions, produces thirſt, and ſeems to warm and ſtimulate the whole ſyſtem. From theſe effects, and particularly from our being able to continue its uſe for a great length of time, not only without weakening the conſtitution, but while we were evidently improving and ſtrengthening it, it has been found ſerviceable in ſeveral of thoſe chronic complaints where other remedies had either failed of ſucceſs, or where their continuance might have been attended with danger.

In ſpeaking of ſea-bathing, I had already occaſion to take notice of the uſe of that remedy in that various tribe of complaints called *ſtomachic* or *dyſpeptic*. It may here, however, be proper to obſerve, that the action of the cold bath, in this ſituation,

tuation, is greatly promoted by the uſe of the water *internally*. It ſhould not be taken in ſuch quantity as to produce much purging, but merely to the extent of keeping the bowels rather lax and open. Uſed in this way, it proves highly ſerviceable in moſt dyſpeptic complaints, not merely by ſtimulating the ſtomach and bowels, and thus promoting digeſtion, but likewiſe by removing that obſtinate coſtiveneſs, which is one of the moſt troubleſome ſymptoms of this diſeaſe.

In thoſe *full groſs habits*, where, from too great a quantity of nouriſhment being taken in, or from too little exerciſe being uſed, the whole ſyſtem becomes at laſt foul and bloated, and as it were oppreſſed with its own ſupport, the uſe of this remedy proves of great ſervice. By its irritating and purgative effects on the alimentary canal, it acts like a kind of drain on the conſtitution, by carrying off its ſuperfluous humours, while its general ſtimulating and heating effects on the ſyſtem tend to prevent their farther accumulation. Uſed in this view, it may be taken more freely than in dyſpeptic complaints, and may with ſafety and propriety be carried the length of producing conſiderable purging. When once the ſuperabundant humours have in a great meaſure been evacuated in this way, the internal uſe of this remedy is then to be combined with its external application in the form of ſea-bathing. Here again, as we look rather to its *ſtimulating* and *tonic* powers than to its *purgative quality*, it may be uſed in ſmaller doſes.

Sea-water has likewiſe been found beneficial in ſome caſes of *worms*. From the advantage derived from the uſe of other purgatives in expeling worms, the uſe of ſea-water in this complaint may be eaſily explained. It is probable, however, that its beneficial effects here may with more propriety

priety be imputed to its bracing and ſtrengthening the alimentary canal, and thus preventing their production. At any rate, as it acts in both theſe ways, it may be eaſily imagined to be a uſeful remedy in this troubleſome diſeaſe.

Of all thoſe diſeaſes, however, in which ſea-water has been found uſeful, there are perhaps none where its uſe has been attended with more remarkable benefit, than in the earlier ſtages of ſcrophula. Even here, like every other remedy, it no doubt often fails; but in general it is ſtill our chief dependence, our firſt as well as our laſt reſort.

As it often requires, to produce its full effect here, to be continued for a great length of time, frequently for years together, it ſhould be taken only in moderate doſes, ſufficient to keep the bowels open, without producing purging. With its internal uſe, too, its external application, in the form of cold bath, ought never to be omitted, where the ſtrength and other circumſtances of the patient admit. It is likewiſe frequently uſed as an application to the ſore or ſwelling; and as I believe it to be juſt as effectual as any other application, I ſee no impropriety in continuing the practice. It may be juſt obſerved here, that, along with this courſe, the occaſional uſe of the *bark*, with plenty of exerciſe in the open air, are very properly conjoined, as conducing to the general indication of bracing and ſtrengthening the ſyſtem.

OF SULPHUREOUS WATERS.

These waters, as their name imports, have long been ſuppoſed to contain a real ſulphur in ſolution, from the ſmell they emit, and from the property they poſſeſs of tinging ſilver. A more careful examination of their contents, however, has aſcertained

aſcertained that they never contain pure ſulphur. This ſubſtance indeed is not capable of being diſſolved in water; and it is only in combination with alkaline ſubſtances, or in the ſtate of a *liver* of *ſulphur*, that it is ever found diſſolved in mineral waters. But more commonly theſe waters owe their ſulphureous qualities and appearance, not to an alkaline ſulphur, but to a *ſulphurated hydrogenous gas*, which they hold in ſolution. It is to this gas that the highly fetid ſmell which they emit, ſomewhat reſembling rotten eggs, is to be attributed, and likewiſe that depoſition of ſulphur in their neighbourhood, which is produced in conſequence of a decompoſition of this gas. Beſide the alkaline ſulphurs, or ſulphurated hydrogenous gas, with which theſe waters are all more or leſs impregnated, they likewiſe moſtly contain ſome of the neutral ſalts. The celebrated wells of Moffat in Scotland, and of Harrowgate in England, contain a conſiderable quantity of ſea-ſalt, and a ſmall portion, as is ſuppoſed, of a calcareous Glauber's ſalt. As St Bernard's well near Edinburgh ſeems to be poſſeſſed of nearly the ſame properties with theſe, it probably holds ſimilar matters in ſolution, though I do not know that any analyſis of this water, ſufficiently accurate to put this matter beyond doubt, has ever been accompliſhed.

The ſulphureous waters poſſeſs nearly the ſame properties, and are uſed moſtly in the ſame diſeaſes, with the ſaline. Taken in conſiderable quantity they commonly prove purgative; in ſmaller doſes they more eaſily paſs off by the ſkin and kidneys. They have been found equally ſerviceable with the laſt in a variety of *dyſpeptic* or *ſtomachic* complaints; in various caſes of *worms*, and where the ſtomach and inteſtines have been loaded with a viſcid ſlime. They are

daily

daily uſed with the greateſt ſucceſs in a number of the different *cutaneous affections*; nor have their good effects been leſs conſpicuous than the former, in thoſe full groſs habits, where luxury and indolence have jointly conſpired to oppreſs the conſtitution, and to undermine the health. In *ſcrophula* likewiſe, the uſe of theſe waters has often been attended with the happieſt effects; in ſhort, in all thoſe complaints where the ſaline have proved beneficial, the uſe of theſe has in general been attended with nearly the ſame ſucceſs. As theſe waters, eſpecially the Harrowgate, are conſiderably purgative, they ſhould not be taken in large doſes; we truſt more to their ſlow and gradual operation, when continued for a length of time, than to their violent purgative effects. In general, they may be uſed from one pint to two or three daily, more or leſs according to the age and ſtrength of the patient.

OF FERRUGINOUS WATERS.

Fortunately theſe waters, as they are perhaps more extenſively uſeful, are likewiſe more generally diffuſed, than either the ſaline or the ſulphureous. There is ſcarcely a pariſh in this country that does not contain a water impregnated with iron, and but few diſtricts where it may not be met with, not only in great plenty, but often of different qualities.

Waters are known to contain iron, or to be chalybeates, from their aſtringent taſte, from their ſtriking a dark colour with an infuſion of galls, which is generally more or leſs deep in proportion to the quantity of iron contained in the water, and from their exhibiting a blue colour with a ſolution of pruſſiate of lime. The iron contained in

in theſe waters was formerly believed to be kept in ſolution by means of the ſulphuric acid; and they were all ſuppoſed to contain true ſulphates of iron. Later diſcoveries, however, have given us more accurate ideas of their nature. From them we learn, that chalybeate waters ſeldom, though they do ſometimes, contain ſulphates of iron; and that the iron, inſtead of being rendered ſoluble in the water by means of the *ſulphuric acid*, is commonly held diſſolved by the *carbonic*. Of this laſt claſs of waters, again, or of ſuch as contain *carbonates of iron*, we find two different kinds. In the one, the acid exiſts only in combination with the iron, and in ſufficient quantity merely to hold that metal in ſolution; in the other, it exiſts likewiſe in a ſeparate uncombined ſtate, ſo as to communicate ſome degree of poignancy or ſourneſs to the waters. Beſide the metallic impregnations with which all of theſe waters are charged, many of them likewiſe contain different neutral ſalts in ſolution, as ſea-ſalt, a calcareous Glauber's ſalt, &c. The mineral waters of Dunſe in Scotland, and of Tunbridge, Buxton, &c. in England, are of the firſt ſort; thoſe of Scarborough, Cheltenham, &c. in England, are of the latter.

Theſe waters are all of them, more or leſs in proportion to the quantity of the metal they contain, aſtringent and ſtimulant. Sometimes, however, the ſaline matters contained in them are in ſuch abundance as to produce a purgative effect. But their operation, as chalybeates, is always more or leſs aſtringent. They ſtimulate the ſtomach and bowels, increaſe the appetite, and promote digeſtion; they quicken and invigorate the circulation, give additional tone and vigour to the muſcular fibres, and warm and ſtrengthen the whole ſyſtem. Hence they are found beneficial in com-

plaints of the ſtomach and bowels ariſing from debility, and, in general, in moſt dyſpeptic complaints. In many of thoſe diſeaſes that are peculiar to the female ſex, the uſe of theſe waters is attended with great advantage. In all immoderate diſcharges of blood from the uterus, that are at the ſame time accompanied with ſymptoms of general debility, and likewiſe in that ſerous or puriform diſcharge, the *whites*, theſe waters may, in general, from their aſtringent and tonic effects, be uſed with much benefit. They are likewiſe employed with equal efficacy in another female complaint, that would, at firſt ſight at leaſt, ſeem directly oppoſite to the firſt of theſe diſeaſes. In what is called a *retention* of the menſes, or when the menſes do not appear about the uſual period, at the ſame time that a number of other ſymptoms occur, (known to depend upon a *retention*, from their being commonly relieved when menſtruation is reſtored), as head-ach, pain of the back and loins, loſs of appetite, with other ſymptoms of dyſpepſia, paleneſs and flaccidity of the whole body, with other ſymptoms of general debility, conſtituting what is called *chloroſis*, or *green ſickneſs*;—in this ſtate of the ſyſtem, the uſe of chalybeate waters, joined with exerciſe and country-air, often prove highly beneficial. By removing that debility on which a *retention* in this caſe, as well as a *preternatural diſcharge* in the former, depended, theſe waters contribute equally to the cure of both diſeaſes; which, however different or even oppoſite they may ſeem in their effects, yet depend upon the ſame general cauſe. Theſe waters, in ſhort, may be uſed with great advantage in all caſes of general debility, which require the uſe of tonic remedies, and where the general indication is to brace and ſtrengthen the ſyſtem: while, on the other hand, they are equally dangerous in all

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thoſe diſeaſes that are accompanied with any degree of fever or inflammation, or wherever the indication in general is to leſſen the force of the circulation, and to lower the tone of the ſyſtem.

Patients in general ſhould begin with ſmall doſes of chalybeate waters, and increaſe theſe gradually in proportion to the effect, as many of them are very ſtrong, and prove conſiderably heating. The common doſe at firſt is one or two gills, to be afterwards increaſed to one or two pints, which ſhould be taken of a morning before breakfaſt, at different draughts, interpoſing ſome time betwixt each draught. The intervals ſhould be employed in walking, dancing, or the like; and when the patient has finiſhed his whole doſe, he ſhould ſuffer ſome time to elapſe, which ought to be ſpent in the ſame way, before he proceed to breakfaſt. If the waters ſhould prove too heating and irritating at firſt, it has been recommended to loſe a little blood, or to take ſome gentle cooling phyſic. During a courſe of the waters, great moderation in the uſe of ſtrong liquors is, from the heating quality of the waters, abſolutely neceſſary; though a few glaſſes of ſome generous wine after dinner may not only be allowed with ſafety, but ſhould even be recommended, as coinciding with the general intention of the courſe, which is to brace and ſtrengthen the ſyſtem. The diet alſo ſhould be regulated on the ſame principle; it ought to be light and nouriſhing, but taken in moderate quantity; and heavy ſuppers, in particular, ought carefully to be avoided. Nor ſhould exerciſe, which is of itſelf ſo powerful a means of bracing and ſtrengthening the conſtitution, be omitted in one ſhape or other, during a courſe of chalybeate waters, where, if it be not abſolutely neceſſary, it is at leaſt highly beneficial: it

ought to be uſed regularly, but not in exceſs. Riding on horſeback, or perhaps, where the ſituation of the patient will admit of it, walking, is one of the beſt modes of taking exerciſe. This may be rendered ſtill farther beneficial by ſome object that may at the ſame time amuſe and occupy the mind, as ſome country-ſport, as ſhooting or fiſhing, or ſome game.

OF WARM MINERAL WATERS.

The mineral waters that have already been taken notice of, differ from common water in containing a mineral impregnation, whilſt they at the the ſame time retain the temperature of the common water in their neighbourhood. There are, however, other waters which, whilſt they contain ſome mineral bodies in ſolution, at the ſame time poſſeſs a higher degree of temperature than common water. Theſe are diſtinguiſhed by the name of *warm mineral waters*, and have been arranged, like the former, into different claſſes, according to the particular mineral held in ſolution.

It ſeems probable, however, that the virtues of theſe waters, at leaſt when uſed as medicines internally, depend on their mineral impregnation, and not on the few degrees of higher temperature they poſſeſs above other mineral waters. In this reſpect, therefore, there appears but little foundation for inſtituting different claſſes of the warm mineral waters, or for ſeparating them from the cold mineral waters which poſſeſs a ſimilar impregnation. At any rate, as very few and but little variety of warm mineral waters are found in this country, I ſhall take no farther notice of them in this place, than juſt to mention one or two of the moſt celebrated, and that rather with

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a view to their effects when applied externally, in the form of *baths*, *pumps*, or *water falls*, than from any conviction of their ſuperior efficacy as internal remedies.

The principal warm mineral waters in this country, are thoſe of Bath and Briſtol in the county of Somerſet, and of Matlock and Buxton in the county of Derby. Thoſe of Bath and Matlock, beſide their ferrugenous impregnation, which is but weak, contain likewiſe ſome of the neutral ſalts, as ſea-ſalt, and a Glauber's ſalt, with ſome calcareous earth, &c. whilſt thoſe of Briſtol and Buxton are chiefly impregnated with ſome neutral or earthy ſalts, as Glauber's ſalt, ſea-ſalt, a calcareous Glauber's ſalt, with ſome calcareous earth, &c. without affording any evident ſigns of containing iron.

As theſe waters differ from one another in reſpect of the metallic matters they contain, they differ likewiſe with regard to their degree of temperature. The Bath waters, upon the whole, are the warmeſt, though even of theſe there be a conſiderable difference in the different ſprings. The water, in the hotteſt ſource of what is called the King's Bath, raiſed the mercury, according to Dr Lucas, in Fahrenheit's thermometer, as high as one hundred and twenty, while that of the Croſs Bath raiſed it only to one hundred and ſixteen. Some trials by other gentlemen, while they make the heat of theſe waters leſs, eſtabliſh yet a more conſiderable difference in the temperature of the different ſources. According to Mr Howard, the water of the *King's-bath pump* raiſed Fahrenheit's thermometer to one hundred and thirteen, that of the *Hot-bath pump*, to one hundred and fourteen, and of the *Croſs-bath pump* to one hundred and eight.

Of the other warm mineral waters, the heat is

conſiderably leſs; that of Matlock water, according to ſome accounts, is 71°; according to others, only 65°. The Briſtol waters, according to Dr Lucas, raiſe Fahrenheit's thermometer to 83°; according to Dr Sutherland, to 76°. Buxton bath, according to ſome accounts, raiſes Fahrenheit's thermometer to 94°, whilſt others again make the heat of this water only 86°.

Theſe waters taken internally are found beneficial in nearly the ſame complaints with the cold mineral waters. The *ferrugenous*, particularly thoſe of Bath, (for Matlock is a very weak chalybeate water), is uſed with ſucceſs in complaints of the *ſtomach* and *bowels* ariſing from *weakneſs*, in all *dyſpeptic*, *hypochondriacal*, and *hyſteric* diſorders. They have likewiſe been uſed with advantage in *ſcrophula*, and in ſome of thoſe diſeaſes peculiar to the female ſex, as in an *increaſed diſcharge* of the *menſes*, the *whites*, and in the various ſymptoms of *green ſickneſs*, or what has been called a *retention* of the *menſes*. As theſe complaints commonly depend upon, or are connected with more or leſs debility, it may be eaſily imagined, from the principles already laid down, that by removing this debility they will often obviate thoſe diſorders that are its immediate conſequence. The uſe of theſe waters requires the ſame caution as the other chalybeates. They are to be avoided in all inflammatory and febrile diſorders attended with heat, thirſt, &c. The *ſaline* are uſed preciſely in the ſame diſeaſes with the cold ſaline waters, and under ſimilar reſtrictions. They have likewiſe been ſuppoſed uſeful in *conſumptions*, and diſeaſes of the lungs, accompanied with hectic fever. As their analyſis affords, however, but very little ſaline matter, I am not inclined to attribute much efficacy to them, beyond that of ſimple dilution with a tepid fluid, and would impute their other

other good effects in a great measure to the circumstances with which their use is commonly accompanied, such as change of air, scene, company, regularity and moderation in point of exercise, diet, &c.

But it is chiefly when used *externally*, in the form of *baths* or *pumps*, that the warm mineral waters have proved such powerful remedies; at least, as their external use has commonly in these situations been combined with their internal, their good effects may with much probability be in a great measure imputed to the former. For the cure, at least the relief, of *gouty* and *rheumatic* complaints, the use of these warm baths has long been justly celebrated. They have likewise been found extremely beneficial in *paralytic* complaints, and some other nervous diseases. But perhaps the most successful application of these waters has been to *weak*, *paralytic*, or *sprained limbs*, and to *stiff joints*. In these situations they have frequently been attended with the most wonderful success. They are used simply by pumping the waters upon the limb or joint that is affected. In this manner rigid joints and weak limbs, that had resisted almost every other remedy, have been often completely cured in the course of a short time.

SOME OBSERVATIONS ON DIET,

Chiefly with a View to point out a more wholeſome and leſs expenſive Mode of living to the lower Claſſes of Society.

GENERAL OBSERVATIONS.

The ſubject of diet conſtitutes, on many accounts, an inquiry of great importance, as well as difficulty. The human body, like that of every organiſed being, is liable, from the mere exerciſe of its functions, to a gradual but inceſſant waſte. To repair this conſtant loſs, a continual ſupply of food or aliment is required; and Nature, we find, has accordingly provided a great variety for this purpoſe. As theſe, however, differ eſſentially from one another, not only in the *quantity*, but likewiſe in the *quality*, of the nouriſhment which they afford, they are thus calculated to produce very different effects.

If this could not fail to be obſerved in a ſound and healthy ſtate of the human body, it muſt have been ſtill more conſpicuous in a ſtate of diſeaſe, where the ſlighteſt cauſes often produce the moſt powerful effects. Thus phyſicians, we find, have, at all times, from the earlieſt records of medicine down to the preſent times, paid great attention to this ſubject. Indeed, in the earlier periods

riods of its hiſtory, medicine ſeems ſcarcely to have ventured farther than to regulate the diet, and to adjuſt the regimen, according to the nature of the diſeaſe. Phyſicians were as yet unacquainted with moſt of thoſe powerful remedies that were afterwards introduced into the Materia Medica; they therefore neceſſarily truſted the cure of moſt diſeaſes to the ſlower operations of diet and regimen. Theſe, with the ancients, were of the firſt importance, and treated with the moſt minute and curious attention; with them, in ſhort, they were every thing. Though not viewed preciſely in the ſame light by the moderns, ſince the diſcovery of ſo many more powerful remedies, ſtill, however, as they may either counteract or aſſiſt the operation of theſe, in thoſe caſes where it has been judged proper to employ them, or, as in many caſes where the operation of more potent medicines might be doubtful, or even dangerous, we truſt the cure to them alone, on theſe accounts, they merit the utmoſt attention even from the modern phyſician. This ſubject, as being already noticed in the beginning of this Work, will be proſecuted no farther here.

But the influence of diet, great and deciſive as it is in this reſpect, is not limited to the effects produced on the body, it extends alſo to the mind. Of the particular *way* or *manner* in which body operates on mind, or how that which is *material* acts upon what is *immaterial*, we are, and perhaps ever ſhall be, completely ignorant. Though ignorant of the *mode*, however, the *operation* itſelf is not the leſs a matter of every day's obſervation and experience. Thus the influence of food on the temper and paſſions, however this may be explained, whether as depending on the *quality* or merely on the *quantity* of nouriſhment it contains, has been long obſerved, and is beyond all diſpute.

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The difference betwixt animal and vegetable food, in this reſpect, is very remarkable both in man and likewiſe in inferior animals. In theſe laſt, indeed, the difference betwixt the carniverous and the herbaceous, may be partly explained, perhaps, on the ſcore of inſtinct or of natural diſpoſition. But were this even ſufficient to account for the difference betwixt the ferocity and cruelty of the wolf and the fox, and the mildneſs and gentleneſs of the ox or the ſheep, ſtill ſome other principle would be neceſſary to explain a ſimilar diverſity among animals of the ſame ſpecies, and conſequently of a ſimilar natural diſpoſition; and the ſubject ſeems well worthy the attention of the moraliſt and philoſopher, to inquire how far the cruel vindictive diſpoſition of the *Tartar* may depend on the horſe-fleſh which he devours, or the mild and gentle character of the *Hindoo*, upon the vegetable aliment on which he ſubſiſts.

Theſe views of this ſubject, as connected with *medicine* or with *morals*, however well calculated to intereſt the phyſician and the philoſopher, yet want the attraction of that general intereſt which in another point of view it ſtill poſſeſſes. It is chiefly from its connection with *political œconomy*, that the ſubject of food or nutriment derives it power of intereſting the general reader. As the population, and conſequently the wealth of a ſtate, depend in a great meaſure, on the facility of procuring ſubſiſtence, this again will be in proportion to the quantity of food produced, or to its œconomical application, for the ſupport of man. The firſt reſpects the various operations of agriculture, the rearing of cattle, &c.; the ſecond relates to the different œconomical and culinary proceſſes that are or may be employed to procure the greateſt quantity of nouriſhment from any

any given produce; to this part of the ſubject we ſhall confine our attention at preſent.

OF NUTRITION IN GENERAL.

NUTRITION is that particular operation of the œconomy whereby animals and vegetables convert foreign ſubſtances into a ſimilar matter with themſelves, and apply this either for the purpoſe of extending their growth, or of repairing their conſtant waſte. In both claſſes the proceſs appears to be of a ſimilar nature; only, like its other functions, it ſeems to be more ſimple in the vegetable. While vegetables, ſo far as we yet know with certainty, act only on air and water, and by decompoſing theſe furniſh all the various products of vegetation; animals are capable of deriving ſubſiſtence from all the different ſpecies of the vegetable and animal kingdom; not indiſcriminately, however, as we find ſome animals ſubſiſt wholly on the one claſs, ſome entirely on the other; while man, as well as a few other animals, generally ſubſiſt on both.

The queſtion, Whether man be a carniverous or a graniverous animal, has been often keenly agitated, and has found many partizans on both ſides. It will, however, be eaſily decided, if, inſtead of liſtening to the different theories of authors on this ſubject, we attend only to reaſon and experience. In the firſt place, we find, from the ſtructure of his teeth, as well as of his digeſtive organs, that man was not deſigned ſolely either for the one or the other; for if his teeth and ſtomach in ſome degree reſemble the carniverous, his inteſtines reſemble

ſemble in ſome meaſure the graniverous, poſſeſſing an intermediate character, as it were, betwixt the two extremes.

To confirm this argument derived from analogy, it is further to be obſerved, that mankind have, in every age and in every country, unleſs reſtrained by religious prejudices or political inſtitutions, derived their ſubſiſtance partly from the one claſs, partly from the other. We know, however, from actual experiment, that an animal purely carniverous cannot ſubſiſt entirely on vegetables; and, *vice verſa*, that a graniverous animal cannot ſubſiſt on animal food; as the gaſtric liquors of theſe different claſſes diſſolve only that particular ſpecies of food, whether animal or vegetable, for which their organs are adapted. Mankind, therefore, we find from reaſon as well as experience, is equally deſigned for either, or more properly for both.

OF ANIMAL FOOD.

That animal food, notwithſtanding of the opinion of many learned and ingenious men to the contrary, forms a proper nouriſhment for the human body, I think ſufficiently eſtabliſhed from the univerſal predilection in its favour, as well as from the reſult of general experience. I would obſerve farther, that, under proper reſtrictions and limitations, it forms a *better* and *more wholeſome nouriſhment* for man, than even vegetables. The reſtrictions and limitations noticed here, I think, are chiefly the following. In the firſt place, it ought not to be begun too early in life, nor continued too late,

late, nor given in large quantities at firſt, but introduced gradually, ſo as to become the chief article of diet, at leaſt at one meal in the twenty-four hours. This is peculiarly proper, and even neceſſary, during the prime and vigour of life, when, from the great exertions both of body and mind, a larger ſupply of nouriſhment is required, than either in the *previous* or *after* periods of human life. During the earlier period of life, that is, from infancy to manhood, the rapid growth of the body, as well as its inceſſant activity, would at firſt ſight ſeem peculiarly to require the ſupport of animal food. This would unqueſtionably be the caſe, but for thoſe inſtitutions of civiliſed ſociety, which, in a great meaſure repreſſing bodily exertion, tie man down at this period to the cultivation of his mind, or to the acquiſition of ſome trade or profeſſion. Where perfect freedom of bodily exertion, however, is allowed at this period, animal food may be indulged in pretty freely, only it may be remarked here, that from the more vigorous ſtate of the digeſtive organs, the ſame quantity of food affords, at this period, a greater proportion of nutriment than afterwards. Towards the decline of life, again, the digeſtive powers being weakened, nature is rather oppreſſed than ſupported by a large ſupply of animal food; and from the highly alkaleſcent, or, as it is called, putreſcent ſtate of the humours, at this time, vegetable diet, at leaſt in a great part, ſeems peculiarly required.

In the next place, animal food ſhould at no time be uſed by itſelf, but always with a conſiderable proportion of vegetable aliment. This direction, at all times neceſſary, becomes peculiarly ſo when the animal food, inſtead of being uſed in a freſh and recent ſtate, is taken after being ſalted and kept for a conſiderable time, and

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not unfrequently after being ſpoiled, and almoſt putrid. Whether in ſuch ſituations it actually induce a *putrid* ſtate of the humours, or to what extent this can take place in the living body, I ſhall not at preſent ſtop to inquire. One thing at leaſt is certain, that when uſed in this ſtate for any conſiderable time, it produces a dangerous and loathſome diſeaſe. This, however, cannot with any propriety be aſcribed merely to the uſe of animal food, but to its uſe in an improper and frequently a ſpoiled ſtate; and I know not of one inſtance of freſh animal food, though uſed in the largeſt quantity, having produced ſcurvy; while, on the other hand, it appears from the accounts of ſome late navigators, to have been an effectual remedy for this diſeaſe, after it had been brought on by the uſe of ſalt proviſions. In attempting thus, however, to vindicate animal food from the charge of inducing ſcurvy, I will not deny, that if uſed in too large a quantity, it may in any ſtate be productive of diſeaſes, in the ſame manner as vegetable aliment, I preſume, may likewiſe, under ſimilar circumſtances; though the diſeaſes from this cauſe would probably be different from thoſe ariſing from the former.

Beſide ſcurvy, ſome other diſeaſes, as conſumption, have likewiſe been attributed to the uſe of animal food. From ſome late obſervations on this ſubject, it would appear, however, that thoſe who uſe this article in the largeſt quantity, are the very people that are leaſt ſubject to this diſeaſe, ſo that it may with more probability be imputed to the uſe of vegetable than of animal food, if it muſt be imputed to the one or the other.

Upon the whole, then, I am inclined to believe, that animal food forms not merely an innocent, but a uſeful and neceſſary part of our diet, and that the diſeaſes imputed to this frequently proceed

ceed from other cauſes; and, at any rate, proceed not ſo much from the *uſe* of this article, as from its *abuſe*, from its being uſed in too large a quantity, or in an unſound and often a putrid ſtate.

It is not intended to enter here on any minute diſcuſſion on the nature of animal food, or of the different qualities of this in reſpect of the different claſſes of animals from which it may be taken; only it may be obſerved in general, that animal food affords a greater ſhare of nouriſhment, in proportion to its bulk, than vegetable aliment; and that of the different ſpecies of animals uſed for food, the *white meats*, as they have been called, are in general leſs nouriſhing, though they are likewiſe leſs heating, than the *red meats*; and that among theſe laſt, the principal difference in this reſpect depends, in the firſt place, on the abſolute quantity of nouriſhment they contain; and, 2dly, on the greater or leſs ſolubility of this in the human ſtomach, or even in the ſtomachs of different individuals.

We are not yet, however, ſufficiently acquainted with the nature of nutrition, or rather with that particular principle in animal food on which nutrition depends, to be able to judge, *a priori*, of the abſolute quantity of nouriſhment contained in any particular ſpecies of animal food; we can therefore reaſon here only from experience of the effects produced, which would ſeem in a great meaſure to be regulated by the greater or leſs ſolubility of the food. This again probably depends on the ſoftneſs of its texture or tenderneſs, which is different according to the *age*, *ſex*, condition of the animal, in reſpect to *fatneſs* or *leanneſs*, &c. and on its more or leſs *complete diviſion* before it be expoſed to the action of the gaſtric fluid.

The effects of age on the texture of meat have been

been generally obſerved, and there are few people ſo ignorant on this ſubject, as not to know that young animals are in general more tender than the aged of the ſame ſpecies, and under ſimilar circumſtances in other reſpects. This doctrine, however, though true upon the whole, is liable to ſome exceptions, or rather modifications, which it may be proper juſt to notice here.

In the *firſt* place, it has been found by actual experiment, that ſome young meats are not ſo readily digeſted as older meats of the ſame ſpecies. This, I think, may be accounted for in two ways: 1*ſt*, The meat of very young animals is ſeldom procured in ſo fat and ſucculent ſtate as that of old animals, (as growing animals are in general fattened with more difficulty than thoſe which have attained their full ſize), and is on that account not ſo ſoluble. 2*dly*, Though the ſolubility of food in the ſtomach depend in a great meaſure on its tenderneſs, I believe it likewiſe depends in ſome degree on its being more or leſs *ſtimulant*. As this again ſeems to depend on the age of the animal, (being greater as the animal is farther advanced), and likewiſe on its food, exerciſe, &c. it may in ſome circumſtances counterbalance the effects of tenderneſs on the other hand.

In the *ſecond* place, it is alleged, and I believe with juſtice, that the meats of older animals contain more nouriſhment, than thoſe of the young of the ſame ſpecies. Now this, it would ſeem at firſt ſight, ought not to be the caſe, if the quantity of nouriſhment were in proportion to the ſolubility of the meat. But the ſame reaſoning will apply here as to the former exception. For though the ſolubility of meat be in proportion to the age, it is likewiſe in ſome meaſure according to the condition

condition or fatneſs of the animal. As young animals can ſeldom be found ſo fat as thoſe that have attained their full growth, they are on this account leſs ſoluble. They are, for the ſame reaſon, leſs nouriſhing, as fat or oil certainly contributes in a particular manner to the nutrition of the human body; and if they be likewiſe leſs ſtimulant, as was before alledged, and therefore leſs digeſtible, this may be another reaſon for their being leſs nutritious.

In reſpect of the *effects* of *ſex* on the texture of meat, it is well known, that among our domeſtic animals at leaſt, the female is, under ſimilar circumſtances of age, condition, &c. always more tender and ſucculent than the entire male. Caſtration, however, at an early period, as it prevents the meat from becoming ſo denſe as it otherwiſe would do, at the ſame time diſpoſes the animal to become more fat, and therefore more ſoluble, as well as nutritious.

The *condition* of the animal, as to fatneſs or leanneſs, produces likewiſe a conſiderable change on the nature of the fleſh, fat animals of the ſame ſpecies, age, and ſex, being always more tender, and therefore more ſoluble than thoſe that are lean.

The laſt circumſtance taken notice of as affecting the ſolubility of food was its *more* or *leſs complete diviſion* before it be expoſed to the action of the gaſtric fluid. As this principle extends to *vegetable* equally with *animal food*, and as I am inclined to think it of more importance than is generally believed, I ſhall conſider it a little more particularly.

The great importance of a complete diviſion of our food may be demonſtrated, in my opinion, from two different views of this ſubject. In the

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firſt place, from the great care and attention ſhewn by nature, in providing animals with organs adapted to that purpoſe. Theſe organs, though wonderfully diverſified in their ſtructure, according to the wants of different animals, and the nature of their food, diſcover one uniform deſign. The *means* indeed are different, but the *end* is ſtill the ſame.

This appears in a peculiar manner in the ſtructure of theſe organs in the graniverous animals. As the food of animals of this claſs is in general of a firmer texture, and more difficult of ſolution than that of the carniverous, it is here eſpecially that we obſerve the moſt beautiful variety of ſtructure, and the moſt perfect uniformity of deſign. Among quadrupeds, we find ſome, like the cow and the ſheep, &c. furniſhed with an apparatus for macerating and ſoftening the food before it be ſubjected to the action of their grinders, that it may be more completely divided, and of courſe more fully prepared for the action of the gaſtric fluids. As this claſs, which from this peculiarity has been denominated the *ruminant*, want the cutting teeth of the upper jaw, nature has made ample amends for the deficiency by this previous maceration before maſtication, or, as it is called, chewing of the cud. In fowls, we find a different contrivance for the ſame purpoſe. As this claſs of animals want the teeth altogether, while the food is often of a very hard and firm texture, we find the graniverous claſs, beſide a crop, as it is called, for maceration, furniſhed with a powerful muſcular ſtomach, capable of triturating or grinding down even the hardeſt bodies, and thus ſerving the ſame purpoſe as rumination in the other claſs. This *diverſity* of the *means* employed for accompliſhing the *ſame end*, places in the

the ſtrongeſt point of view the *importance*, or rather the *neceſſity*, of this operation to the animal economy.

However ſatisfactory this view of the ſubject may be, as ſhowing the importance of trituration from the anxious proviſion made by nature for that purpoſe, another proof, perhaps ſtill more convincing, yet remains to be noticed. This is founded on a conſideration of the effects produced. Of the firſt, the proof was derived from analogy; that of the ſecond reſts on experience and obſervation. The firſt, therefore, was *preſumptive*, but this is *poſitive*. To perceive the effect of trituration, we need only to compare what takes place in thoſe animals where the operation is the moſt complete, as in the ruminant, with thoſe in which it is leſs perfectly performed, as in the horſe. Thus we obſerve the ox requires a much ſmaller quantity of nouriſhment in proportion to his bulk than the horſe; and this laſt again would ſtarve on the ſame ſuſtenance on which the other gets fat. This we account for, from obſerving, that in the ox the food, before it be expelled, is completely diſſolved, and all its nutriment extracted; while in the horſe, a conſiderable ſhare of his food, eſpecially of hard meat, paſſes through almoſt entire and undiſſolved. Similar effects, too, are conſtantly obſerved to proceed from the ſame cauſe in animals of the ſame ſpecies. Thus it is well known, that when an animal loſes its teeth from age or any other cauſe, and becomes in ſome meaſure incapable of trituration, the ſame quantity of food no longer affords it the ſame nouriſhment.

The ſame thing takes place in the human ſpecies in ſome degree, though, from ſome circumſtances that it may be worth while to notice, not

juſt to the ſame extent. In the firſt place, man being deſigned for an inhabitant, not of one particular country or climate, but of the world at large, from the equator to the poles, muſt of neceſſity have his organs adapted to a greater variety of food than moſt other animals, which are either reſtricted by nature to a particular country or climate that ſupplies their neceſſary food, or elſe ſeek, by a periodical migration to another climate, for that ſuſtenance which their own no longer affords. Man, therefore, as having a greater variety of food, has of courſe a greater ſelection, from which to ſuit his own particular need. In the ſecond place, beſide the greater variety thus provided for him by nature, man is poſſeſſed of the means, in his own ingenuity and invention, of altering and preparing the ſame kind of food to his own particular ſituation; an advantage, ſo far as we know, poſſeſſed by no other animal.

Notwithſtanding of theſe advantages enjoyed by man over other animals, *firſt*, in reſpect of the greater variety of choice, and, *ſecondly*, in reſpect of the various ways of altering and preparing his food according to his taſte, or the ſtate of his organs, ſtill we obſerve even here the importance of trituration or maſtication; as we find, other circumſtances being equal, the digeſtion is more eaſy and complete, in proportion as the food is more carefully and minutely divided. This is particularly obſervable in weak dyſpeptic ſtomachs, where, if the food be not very completely divided, it very ſoon runs either into a kind of acetous or putrefactive proceſs.

Having thus endeavoured to obviate ſome of thoſe objections which are uſually brought againſt the uſe of animal food, as well as to lay down a few

few of the more obvious and leading principles which may ſerve to direct our choice in general, I ſhould now proceed to conſider the different qualities of animal food in particular, as this may be taken either from the different claſſes of animals, or from different animals of the ſame claſs. This, however, would lead to a greater length of diſcuſſion than, the limits here preſcribed to us will permit; and, which is ſtill worſe, would after all prove very unſatisfactory, as but little accurate knowledge has hitherto been obtained on this ſubject. Inſtead of entering, therefore, any farther into diſcuſſions which would at beſt be of no benefit to the greater part of thoſe for whom this treatiſe is chiefly intended, (the lower orders of ſociety, I mean), I ſhall confine myſelf here to a few ſimple obſervations and directions which, I think, may really be of ſome uſe.

Animal food, at leaſt butchers meat, has for ſome time paſt been ſo extremely high in moſt parts of this country, that any directions on this ſubject to the common people may almoſt appear ſuperfluous. It may even look like an inſult to a labouring man, perhaps with a large family, to offer him any advice about the purchaſe of an article, which at the preſent price, in general, may be fairly ſuppoſed beyond his reach. Far, however, from wiſhing to inſult ſo uſeful, and, in my opinion, while he conducts himſelf with propriety, ſo reſpectable a member of ſociety, I can only declare, that I ſincerely ſympathiſe with him in any hardſhips and difficulties to which, from his particular ſituation in life, and the general preſſure of the times, he may be expoſed to. In proof of the ſincerity of my declaration, let me plead the freedom and the earneſtneſs of that advice which I am now about to offer him.

In the firſt place, I ſet out with noticing a fact which, though I believe to be unqueſtionable, has not met with the attention which its importance deſerved. It is this, that with regard to the lower ranks of ſociety in general, and eſpecially in reſpect to the labourer, the hind, the mechanic, and the artizan, the *abſolute price* of proviſions is really of very little conſequence; it is only their *relative price*, or the *price of proviſions* compared with *labour*, that affects them. It matters not to me that the price of proviſions be raiſed one third, or a half, or even tripled, provided the price of my labour riſe in the ſame proportion. Thus, with regard to the merchant or ſhop-keeper, an additional duty, or a riſe upon any commodity, does not come out of his pocket, but his cuſtomers. It is the ſame with regard to all that labour, at leaſt, that is employed in raiſing or manufacturing the neceſſaries of life. What cannot be diſpenſed with, *muſt* be purchaſed at the rate which he who has the diſpoſal of it can afford to ſell it at, after deducting the price of his labour. If the article be neceſſary, it *muſt* be purchaſed; and this *can* only be at the ſeller's price.

The chief difficulty that occurs here is in reſpect of that ſpecies of labour that is employed on what may be called the *luxuries*, as in the finer arts, and likewiſe on thoſe manufactures that are intended for foreign markets. With reſpect to labour employed on luxuries, it is evident, that as theſe are not abſolutely neceſſary, thoſe employed in their manufacture cannot command their own price. They *muſt*, therefore, be contented to take what the purchaſer chuſes to give; and if this be not ſufficient to indemnify them for their labour, why then there is an end of the buſineſs? They muſt either take to ſome other trade

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that may be more in requeſt, or carry their labour to ſome other market, where they may receive a more adequate reward. Nearly the ſame thing holds with reſpect to labour employed on the manufacture of goods for foreign markets. If the maſter be not able to indemnify the tradeſman for the labour employed in the manufacture, and at the ſame time to bring his goods to market on the ſame terms with thoſe of others of equal quality, he muſt either give up that branch of manufacture, or go to proſecute it in ſome other place, where the expence of labour is leſs.

It is to be obſerved, however, both in regard to luxuries and foreign manufactures, that though the price of the labour employed on them cannot be raiſed at pleaſure, but muſt always bear a proportion to the demand, or to the ſtate of foreign markets; yet it muſt be ſuch, on the whole, as to indemnify thoſe employed on them, for the greater riſk and uncertainty with which they are conducted. A higher price, therefore, muſt of neceſſity be paid for the actual labour employed on theſe productions, as a compenſation for the uncertainty of employment; ſo that he who reaps the advantages of this uncertainty on the one hand, in the higher rewards he receives for his labour, has no reaſon to complain of its diſadvantages on the other, in the occaſional want of employment. Having made his election, he muſt be content to take the good and the bad of his ſituation together, and cannot reaſonably expect to reap its emoluments without participating, in ſome meaſure, of its inconveniences or hardſhips.

It has already been obſerved, with regard to that ſpecies of labour that is employed in the production or manufacture of the neceſſaries of life, that it muſt univerſally, in every free country,

bring an adequate reward; becauſe, ſince the labour is abſolutely neceſſary, it muſt be purchaſed at the rate for which the ſeller is willing to diſpoſe of it; which, of courſe, includes all the articles that are of prime neceſſity. The only thing like an exception to this general rule, occurs in thoſe temporary fluctuations betwixt the balance of labour and proviſions, from a ſudden riſe of proviſions in conſequence of the failure of a crop, or ſome other cauſe. This evil, though from the nature of the thing it can only be temporary, yet, as it proves very diſtreſſing for the time it laſts, and eſpecially as it has been ſeverely felt this ſeaſon, requires to be conſidered a little more particularly.

In the firſt place, let it be obſerved, that however carefully the balance between labour and proviſions be adjuſted on the whole, yet temporary fluctuations muſt occur on either ſide. If there be a deficiency of labour, proviſions muſt riſe; and if there be a deficiency of proviſions, as in the preſent caſe, labour muſt riſe in proportion: And not only will labour riſe in proportion to the deficiency, or, in other words, the dearth of proviſions; but this riſe will be more or leſs rapid in proportion as the dearth has been more gradual or ſudden. If the riſe of proviſions be very ſlow and gradual, labour may continue for a little as it was; for, beſides the difficulty he finds in raiſing the price to his employer, where the neceſſity is not very apparent, the labourer himſelf is for ſome time, from the change ſtealing gradually upon him, as well as his daily hopes of a more favourable ſtate of markets, unwilling to have recourſe to the meaſure, and rather endeavours for a time to ſupply its place, either by the actual increaſe of his labour, or by a more œconomical management

management of its produce. Should theſe endeavours fail, however, and the riſe continue, he muſt then, of courſe, advance the price of his labour in proportion. But if the riſe of proviſions, inſtead of being ſlow and gradual, as here ſtated, be at once ſudden and conſiderable, the riſe of labour in that caſe will be more ſudden and rapid. The labourer will then not be backward to advance a claim which he ſees to be abſolutely neceſſary, nor can his employer long reſiſt a demand which, while he ſees it to be juſt, he knows at the ſame time the claimant has the power to enforce.

In either caſe, however, ſome little time, though leſs on the laſt ſuppoſition than the firſt, will elapſe, before the price of labour can be brought to a level with that of proviſions. The diſeaſe muſt firſt be aſcertained, before the cure can be adminiſtered. It is this interval which is to be conſidered as the period of real danger and difficulty, and for which, if we wiſh to obviate theſe, a ſuitable proviſion muſt be made. With this view, and from the beſt intention, a wiſh to relieve the labouring claſs of ſociety from ſome of the principal of thoſe difficulties to which their ſituation ſubjects them, I would beg leave to ſuggeſt the following ſhort obſervations to their attentive conſideration.

With a view, then, to meet this emergency, or to provide a ſupply for the interval between the riſe of proviſions and that of labour, I would recommend it to all the labouring claſſes of ſociety, as an invariable rule, not to be deviated from but on the greateſt emergency, to lay by, in favourable years, ſome portion of their wages, as a little ſtock to be kept in reſerve when times grow worſe. To adviſe a labourer, out of his pittance of wages, to

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lay by a ſmall ſtock for an emergency, may, to ſome, at firſt ſight, appear ridiculous. This, however, I know from matter of fact, as well from ſpeculation, to be perfectly practicable. Not only do many labourers and tradeſmen ſave a weekly pittance from their wages, to be put into the box of ſome ſociety, from which they afterwards, in caſe of diſeaſe or indiſpoſition, draw a weekly allowance, but *many* of that claſs, in country-places, indeed I might ſay *all* that are poſſeſſed of proper activity and management, actually do ſave money, and ſome of them conſiderable ſums, which they put out to intereſt.

The firſt of theſe practices, that of putting a ſmall weekly ſum into a ſociety-box, is, in my opinion, not only highly proper and uſeful, as it frequently affords a moſt ſeaſonable ſupply to families which, in conſequence of the temporary indiſpoſition of their head, would otherwiſe experience the greateſt diſtreſs. This fund ſhould therefore be held ſacred, as a proviſion for diſeaſe or calamity. All that I meant to argue from this was, the practicability of what I propoſe; which appears in a ſtill ſtronger light from the other fact taken notice of, the ſums of money that are ſaved by that claſs of people in country-places, where the wages are always conſiderably lower than in large towns or their neighbourhood. To counterbalance this on the other ſide, it may indeed be urged, that living is cheaper there alſo; and therefore they may be better able to ſave a little than thoſe who live in towns. The fact, I believe, though not the concluſion, muſt in ſome meaſure be allowed. That the neceſſaries of life are in general cheaper in remote country-places than in towns, is unqueſtionable, though not to the extent, I maintain, of the difference in the price of labour, becauſe

cauſe the liſt of neceſſaries in ſuch ſituations is always much ſmaller than of what are reckoned to be ſuch in towns; and therefore, the proviſion for them, or, in other words, the price of labour, is ſmaller in the ſame proportion. Suppoſe them, however, which is all that I argue for, to be equal, it follows undeniably, that labour, in general, when properly managed, will always afford ſome little overplus beyond the mere neceſſaries.

But beſide this argument drawn from the general overplus of labour above neceſſaries in common years, another ſtill ſtronger yet remains to be mentioned. As the riſe of labour has been ſhown to be a neceſſary conſequence of the riſe of proviſions, a fall in the price of proviſions will be neceſſarily attended with a correſponding fall in the price of labour. With this difference, however, between the two caſes, that as the labourer, in the firſt inſtance, while he was paying *higher* for his proviſions, received for ſome time only the *ſame* price for his labour, here, on the other hand, the advantage is evidently on his ſide; for, while he continues to receive, for ſome time, the ſame reward for his labour, he is now paying leſs for his proviſions. This extraordinary ſurplus of labour above proviſions happens preciſely in the ſame way as the deficiency between the price of labour and that of proviſions in the other caſe. As it will probably be to the ſame extent, and as it muſt take place equally often with the other, it may therefore be fairly conſidered as an equivalent to it; ſo that the price of labour may be conſidered as permanently above the price of neceſſaries.

Having aſcertained this overplus of labour above neceſſaries, let us next inquire into the beſt method of collecting this, as well as diſpoſing of it

it when collected. The beſt method of collecting it, I apprehend unqueſtionably to be, by laying by a certain ſmall ſum, daily or weekly; ſuppoſe, for inſtance, a ſhilling each week. At ſome ſeaſons of the year, as in ſummer and harveſt, when living is not only cheaper, but wages in general better, there can be no difficulty in ſaving more than this, but in winter and ſpring, it may perhaps be inconvenient to ſpare ſo much, from the neceſſarily increaſed expences at that ſeaſon. I ſhall ſuppoſe it on an average at this rate, or about fifty ſhillings in the year. Let us next inquire how this may be beſt diſpoſed of; and here it fortunately happens, that the end of the ſeaſon which is the beſt for collecting the money, is likewiſe the very time when it may be diſpoſed of to the moſt advantage. This is about the end of harveſt, or the beginning of winter, or about *Martinmas*. About this ſeaſon of the year, proviſions of every kind are commonly the cheapeſt. Some time about Martinmas, then, or at leaſt betwixt that and new-year's day, let this fifty ſhillings be laid out partly on butchers meat, and partly on meal and potatoes. I would propoſe the following proportions: About twenty ſhillings to be laid out on beef, as much on meal, and the remainder on potatoes. Theſe I conſider as the only articles of prime neceſſity, and therefore to be provided for before all others. With theſe ſums, properly laid out at this ſeaſon of the year, he may in general purchaſe about four or five ſtones of beef, ſix or ſeven ſtones of meal, and perhaps about twenty pecks of potatoes. In moſt places, he will be able at this ſeaſon to purchaſe much more of all theſe articles for this money. I am calculating them about the higheſt rate.

Now, it it is evident that this ſmall quantity of proviſions,

proviſions, if they were begun to immediately, would laſt but a very ſhort while in a large family; moſt probably, they would all be done before things had advanced much in their price, and at any rate, long before theſe articles had come to their higheſt price for the year. I would therefore propoſe, in the next place, that the meat, after being well ſalted and packed, ſhould be carefully covered up and ſet by; that the potatoes ſhould likewiſe be carefully put up in ſome dry place, and well protected with plenty of ſtraw from any froſt that may happen; and that the meal, after being kneaded into a little boat, be likewiſe ſet paſt. The chief ſaving intended here ariſes not from laying in a quantity of theſe articles together, by which means they are commonly got cheaper, but from their being then to be got at an eaſy rate, perhaps one half, ſometimes even a third, of what they would coſt afterwards, and from their being afterwards laid by for uſe till this riſe in the price have actually taken place. They are, therefore, to be ſet by till ſpring, when theſe articles commonly begin to get dear; and, in the mean time, the labourer is to truſt to his ordinary reſources for his ſubſiſtence. Nor ſhould even a ſmall riſe in the price tempt him to have recourſe to his hoard before that period, as he may be aſſured, in that caſe, of a more conſiderable riſe afterwards, he ought rather to keep them in reſerve for that period. As the ſpring advances, however, he may begin to uſe them ſparingly, and in ſuch a way as to make them ſerve him, if poſſible, till towards the middle of ſummer, when theſe articles commonly begin to fall again in their price.

As to the articles themſelves—I have adviſed him to take beef in preference to any other kind of

of butchers meat, becauſe it keeps better, when ſalted, than any other meat, except perhaps pork. This keeps well ſalted; and as it is even more nutritious than beef, from its being uſually fatter, it might perhaps be even preferable to this; but unfortunately it does not anſwer ſo well for making broth, which is unqueſtionably an important article in the diet of a labourer's family. Pork, however, does excellently for ſtewing with potatoes, and makes a very ſavoury diſh; ſo that, when he has plenty of theſe, he may uſe a bit of pork for ſalting with fully as much advantage perhaps as a bit of beef. The only thing farther to be obſerved with regard to this article is, to take care that it be well ſalted and packed, and carefully covered up. Meal and potatoes do not require much nicety in the keeping for ſo ſhort a time, only they muſt be kept perfectly dry, and the potatoes carefully defended from the froſt. When the warm weather ſets in, too, potatoes are apt to begin to ſhoot, which hurts very much both their taſte and their nutritious qualities. To prevent this, they muſt be expoſed freely to the open air, and turned carefully every day, or every other day at fartheſt, and any ſhoots that have made their appearance taken off.

After what has been already ſaid on this ſubject, I hope it is not neceſſary to ſay any thing farther on the advantages to be reaped from this plan, as they muſt, I preſume, be ſufficiently evident. I ſhall only obſerve, that, by a regular plan of this kind, beſide the accidental and extraordinary advantage he may reap in a year like this, (when the neceſſaries of life have riſen to two, or nearly three times the price for which they might have been purchaſed laſt year), he will have

have the certain and permanent benefit of laying in every year a ſtock of proviſions, when theſe are cheapeſt, to ſupply himſelf and family for the moſt of the time when they are deareſt. Of the practicability of the plan, I am perfectly ſatisfied. Indeed, it is evident nó difficulty can occur, except the firſt year; for every year afterwards, he will ſave ſo much by the plan propoſed, as will eaſily enable him to carry the ſame into execution in the year following; and even this difficulty of ſaving from two to three pounds of his wages for one year, at leaſt in common years, I am ſatisfied may be got the better of, when the ſolid and permanent comfort of himſelf and family are conſidered as connected with its execution.

The only farther addition I would propoſe to make to this ſcheme, would be in reſpect of an article, not connected indeed with this ſubject any farther than as it forms an indiſpenſable neceſſary to the comfort of a poor man's family during the inclement ſeaſon of the year; I mean, the article of fuel. I ſhould wiſh to extend the plan, if poſſible, ſo far as to admit of two or three carts of coals being laid in at the beginning of winter, which might amount, on an average, to about a guinea additional. This would not only be a great ſaving to him in common years, as he buys them always dear in ſmall quantities, but would prevent the neceſſity of his paying perhaps two prices for this neceſſary article, in caſe of a ſtorm, or any other accident, which may either diminiſh the ſupply or increaſe the demand beyond what is uſual. From this ſhort digreſſion, which, I hope, will not be deemed foreign to the object of theſe obſervations, I return to the conſideration of aliment.

OF

OF VEGETABLE FOOD.

It has long been cuſtomary with writers on this ſubject, while they condemned the uſe of animal food as unnatural and cruel, and as productive of moſt of thoſe diſeaſes to which mankind are ſubject, to launch forth at the ſame time in praiſe of a vegetable diet, as not only the moſt natural, as they affected to call it, but as the moſt conducive to the health and vigour of the human body. In ſpeaking of animal food, I have already hazarded my opinion on that ſubject, and obſerved, that man, from the ſtructure of his organs, and from analogy, was evidently deſigned, at leaſt in part, for animal food, and that the diſeaſes imputed to it aroſe either from other cauſes, or from its being uſed in an improper manner or quantity, or in an unſound ſtate.

I likewiſe ventured to alledge farther, that a moderate uſe of animal food was more conducive to health than a vegetable diet. In making this aſſertion, I had chiefly the lower claſſes of ſociety in view, who, while from their ſevere exerciſe and fatigue, they certainly require more nouriſhment than the other ranks, yet in general take much leſs. Hence the greater part of the diſeaſes among this claſs, eſpecially in large towns, are of the low nervous [illegible] ſuch as proceed in general from debility and a want of proper food. The truth of this aſſertion, I believe, will ſcarcely be called in queſtion by any medical man at all converſant with the ſubject. Far from inveighing, therefore, againſt the uſe of animal food,

I do not hesitate, in addressing this class, to recommend a more liberal use of this article than is customary at present. This, however, is only to be done by a well-regulated plan of œconomy, similar to what has been recommended, and by laying aside all those foolish luxuries that are at best useless, some of them even of themselves pernicious; and which are all, unquestionably, highly so, when used to the exclusion of such an important article of diet as animal food. As the chief of these I consider spirits, tea, snuff, and tobacco. Now, suppose that a moderate use of these articles were even harmless or innocent, when indulged in by people who at the same time have plenty of the necessaries of life, yet on how different a footing do they stand with regard to the lower classes! It is perfectly evident, that the common wages of labour cannot afford both the luxuries and the necessaries of life. The labourer, therefore, who indulges in the luxuries, must do it at the expence of resigning a proportional share of the necessaries. The one, at least the necessaries, he may have; both he cannot expect. The alternative is in his choice. Let him then make his election; only, should he chuse the luxuries, let him remember that he has no right to complain if he be in want of the necessaries. If his labour industriously exerted, and the produce carefully applied to the purchase of necessaries for himself and family, be still inadequate to their subsistence, then, and not till then, may he arraign the institutions of that society, which in dooming him to labour without an adequate reward, has aggravated, tenfold, the original sentence of his condemnation, "In the sweat of thy face shalt thou eat bread, till thou return to the ground."

In thus endeavouring, however, to reſtrain this claſs from the uſe of luxuries, which are of themſelves *many* of them hurtful, and which muſt, *all* of them, be more or leſs ſo, when uſed to the excluſion of any of the neceſſaries, I am far from wiſhing to deprive them of the gratification of any innocent indulgence. I am far, very far, from the moſt diſtant wiſh to abridge, on the whole, the ſum of their enjoyments; but as theſe are neceſſarily limited in ſome meaſure by their ſituation, I would fain direct their choice to ſuch as are really uſeful. If I would thus debar them from the uſe of ſome of the luxuries, it is only with a view to bring more of the neceſſaries, and even of the comforts of life, within their reach. What was thus deducted, therefore, on the head of ſuperfluities, would be returned with intereſt, in the full enjoyment of the neceſſaries, and of ſome of the comforts, of life.

Though I have already ventured to recommend to the lower orders of the people a more liberal uſe of animal food, becauſe I am ſatisfied that this, by proper management and œconomy, is not only within their power, but would at the ſame time be highly conducive to their enjoyment and their health, I am yet far from being averſe to the uſe of vegetables. On the contrary, if, inſtead of the labourer and the mechanic, I had been addreſſing the wealthy and the luxurious, my advice would have been juſt the reverſe; and, in place of recommending a more liberal uſe of animal food, I would have adviſed them to uſe a great deal leſs of this, with a larger proportion of vegetables; neither the one nor the other of thoſe kinds of food being *abſolutely* hurtful of itſelf, but only when conſidered *relatively* to the ſituation and occupation of the perſon employing the

the ſame. Thus the ſame kind, or the ſame quantity, of food that may be uſeful, and even neceſſary to the labourer and the mechanic, may be, and actually is, highly injurious to the indolent and the inactive. Nor are the lower claſſes more liable to diſeaſes from want and inanition, than are the higher ranks from exceſs and repletion. Whilſt I would recommend, therefore, a more full and nutritious diet, and conſequently conſiſting more of animal food to the former, I would at the ſame time recommend one that was more ſpare and abſtemious to the latter, compoſed, of courſe, of a larger proportion of vegetable matter.

Vegetables, in general, yield not, in proportion to their bulk, the ſame quantity of nouriſhment as animal food does. They ſeem, however, to afford it of nearly the ſame quality, as appears not only from inſtances of particular individuals, but even of whole claſſes and nations, who, from taſte or particular prejudices, political or moral, ſubſiſt entirely on vegetable food, without experiencing any particular inconvenience. As containing leſs nouriſhment in the ſame bulk, it is moſt properly conjoined in diet with a portion of animal food; this laſt ſupplying in *quality* what the former wants, whilſt the former again makes up in *quantity* for that in which the latter is deficient, ſerving thus mutually, as it were, to correct the deficiencies the one of the other.

If vegetable food be leſs nouriſhing than animal food, it is likewiſe leſs ſtimulant, or, as we commonly ſpeak, leſs heating. On this account, we uſe vegetable food only in all acute or febrile diſeaſes. It is, however, at the ſame time, leſs eaſily digeſted than animal food, and therefore more readily produces flatulence, particularly in

people whoſe ſtomach and bowels are weak. Whether this greater difficulty of digeſtion proceed merely from the firmer texture of vegetables, which thus prevents the gaſtric fluid from acting ſo readily upon them, or whether it may not proceed from ſome other cauſe, as from the weaker attraction between theſe ſubſtances, does not ſeem ſufficiently aſcertained. One thing at leaſt appears certain, that in proportion as we diminiſh this firmneſs of texture in vegetables, either by the application of heat, as in the different operations of cookery, or by mere mechanical diviſion, as in grinding, &c. we in general increaſe the facility of their ſolution. This ſubject, however, will be reſumed afterwards.

As all vegetables in general do not equally afford nouriſhment to man, and as even of thoſe that do only a certain portion of them ſeems to anſwer that purpoſe, it would be requiſite, to treat this ſubject in a ſcientific manner, to aſcertain, in the firſt place, on what particular principle or principles of vegetables, nutrition depended; and afterwards, in treating of particulars, to aſcertain how far or to what extent, this principle was found either in different individuals, or in different parts of the ſame individual. But, unfortunately, we are not yet ſufficiently acquainted with the nature of nutrition, to know on what particular principle of vegetables this depends. We ſee every day a variety of different vegetables taken as food. Of theſe we obſerve ſome more and ſome leſs nutritious, without our being able to explain ſatisfactorily the ſuperiority of the former, any more than the inferiority of the latter. We know indeed from experience, that ſuch ſubſtances as contain a large proportion of the *oily* or the *ſaccharine* principle, are in general remarkably

remarkably nutritious. But we know likewiſe, that other ſubſtances which do not appear to poſſeſs either of theſe properties, as mucilages, gums, the fecula of plants, &c. prove equally nutritious.

We know likewiſe, that digeſtion, which may be conſidered as the firſt part of the proceſs of nutrition, is neither effected by trituration, fermentation, nor any of thoſe proceſſes that had been ſo fooliſhly imagined, but is really in ſome meaſure a true chemical proceſs; and that an actual ſolution of our food, animal as well as vegetable, takes place by means of the gaſtric fluid. But ſtill this leads us but a very ſhort way in explaining the proceſs of nutrition; for though, from what I obſerve in chemical ſolutions out of the body, I may eaſily imagine that ſomething of the ſame kind takes place in the ſtomach, yet this gives me no information reſpecting the manner in which vegetable aliment is firſt converted into chile, then into blood, and laſtly into the real ſubſtance of the animal. Solution indeed leads me to infer a change in the coheſion or conſiſtence of a body, but it does not neceſſarily lead me to infer a change in its other properties, or in the nature of the ſubſtance. If I diſſolve a ſalt, for inſtance, in water, it is ſtill a ſalt poſſeſſing all its properties but that of ſolidity; which may be eaſily reſtored to it again by the evaporation of the water. The ſolution of a vegetable, therefore, conveys to me no preciſe information reſpecting its converſion into chile or blood. Nor is this all: Man, as well as other animals, may be nouriſhed either entirely, or in part, upon animal or vegetable ſubſtances in a fluid ſtate. Here, therefore, it is evident, no ſolution can take place. Digeſtion muſt therefore depend upon ſome other and more general cauſe, of which ſo-

lution ſeems merely an *accidental*, not a *neceſſary* effect. But I return from this digreſſion.

Beſide our ignorance of the nature of nutrition in general, we labour under a farther difficulty here in treating of this ſubject. The analyſis of the different vegetables which we uſe for food, has not hitherto been made with ſufficient preciſion to aſcertain accurately all the different principles of which they are compoſed, or the various proportions in which theſe enter into their compoſition; ſo that, were we even acquainted with that particular principle of vegetables on which nutrition depends, yet as we are ignorant of the exact proportion in which this may be combined in different vegetables, we ſhould ſtill be unable to apply the general principle to particular vegetables. All that we ſhall venture to do, then, in this ſituation, will be, to offer a few ſhort remarks, ſuch as experience and common obſervation have ſuggeſted, on ſuch of thoſe vegetables as are in moſt frequent uſe in this country, with ſome reflections on the moſt œconomical mode of uſing them for food. We ſhall begin with thoſe ſubſtances which, from their containing a large quantity of farina or flour, have been called farinaceous.

OF FARINACEOUS BODIES.

This claſs comprehends the greater part, and certainly the moſt nutritious, of thoſe vegetables that are uſed by man for food in different regions of the world. Moſt of them, before being uſed,

uſed, are ground down to a farina or meal, and afterwards either made into bread by baking, or converted into a kind of pottage or pudding, by boiling with water, &c. A few of them, however, are generally uſed in their entire ſtate, only taking off their outer ſkin or huſk. I ſhall offer a few remarks on ſuch only as are in moſt frequent uſe in this country, or in my opinion deſerve to be ſo.

Wheat.—This article, under the form of bread, is one of the farinaceous ſubſtances moſt frequently uſed, not only in Britain, but in Europe, and even in America. This general preference in favour of wheaten bread can ſcarcely proceed from prejudice or accident, but muſt be founded on the ſuperior qualities of the ſubſtance itſelf. This is in ſome meaſure, in my opinion, confirmed, when we conſider that wheat is not only raiſed with more difficulty than moſt of the other farinaceous ſubſtances, but is in general leſs productive, and of courſe uſually bears a higher price. Whether it really contain, however, in proportion to its bulk, a larger quantity of nouriſhment than any of the other ſubſtances of this claſs, does not appear quite certain; but there is no doubt, that, when properly managed, it forms a lighter, and, in general, a more palatable bread than any of the other farinaceous ſubſtances with which we are acquainted. As this is the way in which it is commonly uſed for food, it is probably the chief reaſon of that general preference given to this grain over all the others. Though this, however, may appear a ſufficient reaſon for uſing this grain in preference to others for the purpoſe of making bread, it by no means follows hence, that ſome of the others may not be uſed with equal, or even with more advantage, under ſome

other mode of preparation. This I actually maintain to be the caſe; and while I allow, in general, that the flour of wheat makes, unqueſtionably, the moſt perfect bread, I muſt inſiſt that bread of any kind is not the moſt œconomical or thrifty mode of uſing grain*, and that ſome of the other farinacea, as

* The mode of living in general, adopted by the lower claſſes of ſociety through a great part of Britain, but eſpecially in towns, is certainly extremely injudicious and improper. It were difficult to determine whether it were moſt injurious to the public, or the individual. In the firſt place, inſtead of confining himſelf to the uſe of neceſſaries, he muſt vie with the rich, forſooth, in the uſe of ſpirits, tea, tobacco, which, though they may be *luxuries* to the rich, certainly cannot be ſo to him who is in want of the *neceſſaries*. In the ſecond place, of theſe neceſſaries wheaten bread conſtitutes the principal, and indeed almoſt the ſole article of his ſubſiſtence. To the truth of this aſſertion, I can myſelf bear witneſs, having found repeatedly, of late, when I had occaſion to viſit families of this deſcription, a poor man, with a large family, ſitting at mid-day, round a tea-table indeed—but without any other thing, beſide the tea-equipage, but a bit of *dry wheaten bread*; and this was his dinner! The folly of a poor family ſitting down to take a diſh of tea to their bread, when they cannot afford a bit of butter to it, is truly extravagant! this is really "the muſtard without the meat."

That univerſal cuſtom of the lower claſs, of uſing wheaten bread to all their meals, or indeed, I might ſay, of living entirely upon it, cannot, for many reaſons, be too much condemned. *1ſt*, Wheat, as being neither eaſily reared nor very productive, muſt always be expenſive. Beſides, the increaſed demand, which is the conſequence of this univerſal paſſion for wheaten bread, by turning the attention of the farmer to this, withdraws it in ſome meaſure from the cultivation of other ſpecies of grain that are more productive, and therefore more beneficial; and thus proves a public loſs. *2dly*, Baked bread of any kind, from the extraordinary trouble that neceſſarily attends this operation, muſt always be conſiderably more expenſive than grain of the ſame kind that can be uſed for food

as better adapted to other and more œconomical preparations, ought therefore to be preferred for common uſe. Wheat-flour indeed may be uſed for food in various other ways beſide being baked into bread, and this objection might thus be obviated.

food without this previous manufacture. *3dly*, Another conſideration of ſtill more importance than the two former is—that the *ſame quantity of grain* baked into bread will not afford near the *ſame quantity of nouriſhment*, in other words, will not ſatisfy hunger or ſupport the ſtrength equally, with a ſimilar quantity prepared in a different manner, particularly when made into *pottage*, or *haſty pudding*, or into a *ſoup* by proper boiling. The difference in this reſpect is of the utmoſt importance, not only to the poor, but to the public at large, and to a perſon who has not made or ſeen the experiment, is truly aſtoniſhing.—From my own obſervations, which, I confeſs, have not hitherto been made with ſufficient frequency and preciſion, I would conclude, that this was, at the very leaſt, in the proportion of three to one; (I ſay at the leaſt, becauſe I believe it to be ſtill more); that is, that five ounces of barley or rice properly boiled, or till it be of the conſiſtence of a jelly, or the ſame quantity of oat-meal well-boiled into pottage—will afford as much nouriſhment, in ſhort, as ſubſtantial a meal, as fifteen ounces of any of theſe ſame ſubſtances baked into bread. This aſſertion, however extraordinary it may ſeem, does not reſt alone on my own obſervations. It appears from ſome experiments of the well-known Count Rumford, made in feeding the houſe of induſtry at Munich, that about one pound and a quarter of ſoup was ſufficient for each individual to dinner, that is, for the purpoſe of ſatisfying hunger, and ſupplying nouriſhment. This portion of ſoup contained only from five to ſix ounces of ſolid materials, namely, barley, peas, cuttings of bread, and potatoes. This laſt article, too, not very nutritive to its bulk, was in conſiderably larger quantity than all the others put together. Now, in eſtimating the quantity of ſolids here, the Count has evidently taken them at too much, in conſidering the whole materials

viated. But then, on the other hand, theſe other preparations of wheat-flour, puddings, &c. require, to render them palatable, various additions, too expenſive for the common people.

An objection, however, occurs here, which, from the great authority on which it reſts, requires a little more conſideration. The farina of wheat, it

terials employed as ſolids; for beſide the water contained in the other vegetables, (and baked bread contains a conſiderable proportion), the potatoes, which here conſtituted conſiderably more than one half of the whole, conſiſt always, for a great part, of water. So that, making the neceſſary allowances, the quantity of ſolid matter was ſtill greatly leſs than the eſtimate, probably not above three or four ounces.

That ſo ſmall a portion of ſolid food, and that vegetable too, ſhould be perfectly ſufficient to ſatisfy hunger, and to maintain health, (for beſide this ſoup, which was ſerved up to his dinner, each individual got nothing elſe through the day, but about ſeven ounces of rye-bread, which uſually ſerved for his ſupper), is truly aſtoniſhing! To account for this, the Count ſuppoſes that the water made uſe of was thus ſomehow "prepared for decompoſition," and that if afterwards entered into the compoſition of the human body, in the ſame manner as it is known to be decompoſed by vegetables in general, and likewiſe by ſome animals, as fiſhes. To enter into any ſerious diſpute with the ingenious Count upon a mere ſuppoſition of his, unſupported by any thing but vague analogies, would in my opinion be improper any where, but in a Work of this kind ridiculous. I ſhall only ſtop to obſerve here, that the analogy taken from the decompoſition of water by plants ſcarcely affords a preſumption even that the ſame occurs in animals, ſince we know that plants likewiſe decompoſe nitrogene gas, on which animals do not produce the ſlighteſt change. Nor is the analogy with fiſhes much better ſupported, as fiſhes ſeem capable of living merely on *water*, which may thus ſupply to them the place of *air*. I ſhall afterwards endeavour to explain this on a different principle.

it is now well known, contains a conſiderable proportion of a glutinous matter, which the other farinacea either want entirely, or contain but in very ſmall quantity. It is equally well known, that the farina of wheat, perhaps in conſequence of this glutinous matter, ferments more readily and more completely, or, in common language, riſes better than any of the other farinacea do;—and from this ſame cauſe, a more complete previous fermentation, wheaten flour makes a lighter and more perfect bread than any of the other farinacea. Now, as it has been maintained, that all unfermented farinacea were unwholeſome, and that in particular, (as the great Boerhaave firſt, and many others afterwards, alledged), they produced a ſpiſſitude or thickening of the fluids;—it therefore followed of courſe, that as the farinacea in general, in the operation of baking, underwent a more complete fermentation than in any of the other common modes of preparation, bread, therefore, was the moſt wholeſome method of uſing theſe ſubſtances,—and of courſe that wheaten bread, as being moſt completely fermented, was the beſt.

In anſwer to this, it is to be obſerved, that if flour, and particularly wheaten flour, muſt be made into bread for uſe, I believe that it will make a lighter bread, and of courſe will, in general, be more eaſily digeſted, if it have been previouſly ſubjected to a degree of fermentation. This rule, however, applies only, or at leaſt in a ſpecial manner, to the flour of wheat. For the flour or meal of barley and of oats, when properly baked and fired, without any fermentation, makes a bread equally light with wheaten bread. This I affirm from my own obſervation, as well as common experience. But wheaten flour, if baked without fermentation, certainly

certainly does make a heavier bread, and to people of delicate ſtomachs, or with dyſpeptic complaints, leſs eaſy of digeſtion.

Whether this may proceed from the large proportion of glutinous matter which it contains, is not certainly known: nor is it much more certain whether its more complete fermentation depend upon the ſame principle. At any rate, this proceſs ſeems to produce a change on it, ſimilar to what animal food undergoes by being kept for ſome time before it be uſed. Whether theſe changes be preciſely of the ſame nature, I will not venture to affirm, only there appears to be a conſiderable analogy betwixt them in the cauſes which excite, and the ſymptoms that accompany, them, as well as in the effects which they produce. The fermentation of bread, therefore, I conſider as no more neceſſary to render it wholeſome, than the preſervation of animal ſubſtances a certain time before they be uſed. Both the one and the other ſoftens the coheſion of that body which undergoes the proceſs, and may thus render it lighter, as it is called, or of more eaſy digeſtion, particularly to ſuch as have weak ſtomachs. But the idea of unfermented bread producing certain diſeaſes, particularly an inſpiſſated ſtate of the blood, I conſider as merely the dream of a mechanical phyſician.

Oats.—This, for a long period of time, was the grain moſtly uſed for food in this country, as well as in ſome parts of England. Of late, however, a more general introduction of wheaten bread into this country has in a great meaſure ſuperſeded the uſe of this article, except in remote country-places. Almoſt every where elſe, but eſpecially in towns, wheaten bread alone is now made uſe of even by the pooreſt claſs of the people. This general

general change in the mode of living, I am afraid, has not been leſs diſadvantageous to the public, than hurtful to individuals. Oats are in general in this country a much more certain, as well as a more productive crop than wheat; their cultivation is of courſe more beneficial to the public. They do not require either the ſame manure or the ſame tillage with wheat. They muſt in general, therefore, be afforded much cheaper, and of courſe the individual, in uſing this grain, ſaves the difference.

To both theſe allegations it may indeed be objected, that though oats be in general a more productive crop than wheat, and may commonly be afforded much cheaper—that it does not neceſſarily follow from this, that the cultivation of the former is more beneficial to the public, or their purchaſe a ſaving to the individual, unleſs it can be ſhewn at the ſame time, that they afford an equal quantity of nouriſhment; at leaſt any deficiency in the *quality* muſt be more than compenſated by the exceſs of *quantity*. To anſwer this objection completely, ſome data are ſtill wanting, as no experiments that I know of have been made to aſcertain the nutritiouſneſs of the two grains under preciſely ſimilar circumſtances, or with exactly the ſame mode of preparation. Wheaten flour, is now very univerſally, I believe, uſed for making into bread after being fermented while oat-meal is as commonly, when uſed for that purpoſe, baked without any previous fermentation.

From the flour of theſe two grains, employed under ſuch different circumſtances, no abſolute concluſion can be drawn, as it is well known that the nutritious qualities of food, particularly of vegetable food, depend much on the method of preparing

preparing it; and as theſe flours may be, and are, at leaſt the oat-meal, very commonly uſed in another way, in which, as I ſhall afterwards ſhow, it is much more nutritious than when baked. The two flours are indeed both ſometimes baked into bread without fermentation, and this, though it could not, for the reaſon juſt given, afford a poſitive concluſion, would certainly be a fairer comparative trial than the other. But then, wheaten flour is ſo ſeldom uſed in this way, without other additions, as butter, &c. which muſt certainly improve its nutritious quality, that common experience is not of itſelf ſufficient to aſcertain this point; and no direct experiments that I know of have been made for the purpoſe.

But were it even proven, which it has not been, that wheaten was more nutritious, in proportion to its weight, than oaten bread, this would prove nothing with regard to the general propoſition, that wheat was more nutritious than oats. It would only prove, that in this particular mode of preparation wheat was preferable to oats; which might depend on the ſpecific preparation of each, the one being fermented, the other not, and likewiſe on the relative quantities of water employed in baking them, which might give a difference in their relative weight. I will even confeſs, I am myſelf, though not from any direct experiments or obſervations of my own, inclined to think that wheaten bread is more nutritious than oaten, when both are made in the uſual way. This not only coincides, I believe, with the common opinion on this ſubject, but perfectly falls in with my general principle, that the nutritiouſneſs of theſe grains depends very much upon their more complete preparation. And that this is actually the caſe in the baking of wheaten bread, cannot be denied.

Were

Were it, therefore, abſolutely neceſſary in uſing theſe ſubſtances, to bake them firſt into bread, this would certainly be one reaſon for giving a preference to wheat, tho' other reaſons againſt its general uſe, at leaſt, might ſtill counterbalance this, as the ſmaller product, the more difficult and precarious cultivation, the higher price of the grain, &c. as well as the more difficult, and of courſe more expenſive, preparation of the bread. When all theſe items ſhall either be placed to the *debit* of wheat, or when, after every neceſſary deduction, if ſuch there be, the balance ſhall ſtill be ſhown to be on the ſame ſide; then, and not till then, will that univerſal predilection for wheaten bread, and of courſe the greater attention of the farmer to the cultivation of this grain, be either beneficial to the public, or advantageous to the individual.

I ſhall now, however, endeavour to ſhow, that the operation of baking, ſo far from being neceſſary to the uſe of any of the farinacea, is in reality the moſt profuſe and extravagant way in which, ſo far as I know, they can poſſibly be uſed. That this is really the caſe with reſpect to ſome of the farinacea, barley and oats for inſtance, which, from their being frequently, in this country, uſed in the form of ſoup and pottage, thus afford a ſtandard of compariſon to judge of their relative nutritive qualities, there cannot be the leaſt doubt. With reſpect to wheat, there is every reaſon to think that the ſame argument will apply in a great meaſure, though, from its being leſs frequently employed by itſelf in any other way but in that of fermented bread, we have not the ſame opportunity of inſtituting a compariſon. But I have very little doubt that wheat, perhaps uſed either in the form of barley for ſoup, or in that of flour for puddings or dumplins, if boiled ſufficiently

ſufficiently with a proper quantity of water, will afford a great deal more nouriſhment than if baked into bread. That the difference in this reſpect, however, betwixt theſe preparations of wheat, would be equal to that between the preparations of barley and oats, I will not venture to aſſert, as wheaten bread, by the more elaborate proceſs in baking it, in which a conſiderable portion of the water is very probably decompoſed, or at leaſt ſomehow enters into compoſition with it, is probably more nutritious than either oaten or barley bread.

But ſuppoſe it otherwiſe, and that wheaten bread were actually the moſt thrifty and œconomical mode of uſing this grain, this, far from weakening, would ſtrengthen conſiderably the general argument, reſpecting the utility to be derived from a more ſparing uſe of the article of bread, and to ſupply the deficiency, a more frequent and liberal uſe of ſoups, broths, pottages, &c. For if it be allowed, which, I believe, cannot be denied, (as it appears from an average of actual ſurveys taken in a conſiderable part of England, a ſoil and climate, too, certainly more favourable to the cultivation of this grain than Scotland), that wheat, though it be always ſown upon the beſt land, is much leſs productive than oats or barley, at the ſame time that it requires a more laborious and expenſive cultivation, and of courſe muſt always be bought at a much higher price;—if wheaten bread be likewiſe the moſt œconomical, as it is almoſt the univerſal, mode in which this grain is employed, or at leaſt if the other methods of uſing it be only on a par with this;—if, then, it can be ſhown, that oats and barley, which have ſo many other advantages to recommend them, have likewiſe this peculiar, and I muſt call it aſtoniſhing,

aſtoniſhing, ſuperiority, that perhaps one *fourth*, at any rate a *third*, of either of theſe grains, properly prepared, either in the form of ſoup or pottage, will afford as much nouriſhment as *three* times the ſame quantity of wheaten bread, which beſide this has many other drawbacks attending its uſe. This will, in my opinion, place the argument in the moſt ſtriking point of view; I enter now, therefore, on this part of the ſubject.

I begin with the experiments, which I had already occaſion to notice, of Count Rumford; and I do this the more willingly, as the probity and accuracy of that gentleman, as well as the publicity of the experiments themſelves, render the facts perfectly unqueſtionable. From theſe, then, it appears, that twelve hundred people were conſtantly maintained at the Houſe of Induſtry of Munich;—that each of theſe received daily about a pint and a quarter, or nearly twenty ounces, Avoirdupoiſe weight, of ſoup, with a bit of rye-bread, of ſeven ounces weight;—that they came early to the houſe in the morning to their work, and, after continuing there all day, went home late at night, ſo that there was every reaſon to think they got no other ſuſtenance than what they received at the Houſe of Induſtry;—and that they exhibited all the appearance of health and contentment.

Now, each of theſe portions of ſoup, according to the Count, contained nearly ſix ounces of ſolid food; in one caſe, this conſiſted of equal parts of pearl-barley, and peas, with nearly one fourth of fine wheaten bread; in another, the peas and the barley were reduced to one half the uſual quantity, and a quantity of potatoes, double the meaſure of both, was ſubſtituted in their ſtead, the bread being continued the ſame as before.

The Count, in eſtimating the quantity of ſolids contained in each portion of the ſoup at ſix ounces, takes the laſt caſe, where the quantity was greateſt. As the caſes were brought forward, chiefly with a view to ſhow for how ſmall a ſum a portion of the ſoup could be afforded, he naturally takes that which was the cheapeſt. This was in the caſe where potatoes were ſubſtituted to a portion of the peas and barley before employed. Theſe, though they added greatly to the weight of the ſolids employed, from the large proportion in which they were taken, yet from their ſmaller price diminiſhed conſiderably the expence of the preparation. The Count, therefore, as he was at perfect liberty, took that which was the moſt to his purpoſe. It is equally natural for me, however, in making my own uſe of theſe experiments, to take the ſame liberty.

I have therefore brought forward the firſt caſe likewiſe, as the quantity of ſolid materials here, to each portion of the ſoup, was only a trifle more than $4\frac{1}{2}$ ounces, or exactly $4\frac{672}{1200}$ ounces. Now, even of this quantity of ſolids, ſmall as it may appear, it is to be obſerved, that very little above three-fourths entered at all into the compoſition of the ſoup; the other fourth, or nearly ſo, conſiſted of wheaten bread, which was cut down, and mixed with the ſoup after it was diſhed, merely for the purpoſe of being eaten along with it. The whole ſolids employed, therefore, in preparing one portion, amounted to little more than $3\frac{1}{2}$ ounces, or at leaſt was conſiderably below four ounces, in this caſe. Nor even in the other caſe, where the whole ſolids taken amounted to nearly ſix ounces, will the real quantity be very different from this, if proper allowance be made for the large proportion of water contained in the potatoes, which, it

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is to be recollected, conſtituted double the quantity of all the other ingredients by meaſure, and very nearly ſo by weight. The average of the two, therefore, may be fairly enough taken at about four ounces; and this, with ſomewhat leſs than an ounce of bread cut, and put into the ſoup when it was diſhed, with a ſmall proportion of ſalt and vinegar for ſeaſoning, was all that was employed, except the water, in preparing this meſs of ſoup. Beſide this meſs of ſoup, which ſerved for dinner, each individual likewiſe received ſeven ounces of rye-bread, which commonly ſerved for his ſupper. This was the whole of the daily ſubſiſtence received by each individual at the Houſe of Induſtry at Munich; and the Count farther adds, that they came thither ſo early in the morning, and left it ſo late at night, that they could not find time to prepare any thing at their own houſes; and he believes, (except ſome of them, who were in the habit of taking a pint of beer at night when they had done with their work), that they really had nothing elſe; yet, far from having the appearance of being ſtarved by this ſeemingly ſmall allowance, they had all the appearance of health, as well as contentment.

Such are the highly curious and intereſting particulars of the experiments of Count Rumford in feeding the poor of the houſe of induſtry at Munich, from which, in my opinion, the following concluſions may be drawn. In the *firſt* place, it appears that about four ounces of barley and peas, or nearly the ſame quantity (allowance being made for the water contained in the potatoes) of barley, peas, and potatoes, were ſufficient, when made into ſoup, with leſs than one-fourth of wheaten bread cut and put into it, and a little ſalt and vinegar to ſeaſon it, to afford one full ſubſtantial meal to a labouring man. Now, I maintain that

three times the quantity of theſe ſame materials baked into bread, and eaten with the ſame ſeaſoning, or with any other at the ſame expence, will not afford either ſo comfortable or ſo ſubſtantial a meal. Nay, I would even go farther, for I aſſert, that even three times that quantity, or twelve ounces of wheaten bread, (which I believe to be the beſt and moſt nutritious of all bread), with an allowance of the full expence of the other articles for any other thing to be eaten along with it, will not after all give ſuch a full and ſubſtantial a meal as the four ounces of barley and peas made into ſoup, though it will coſt at leaſt from three to four times the expence. In the *ſecond* place, Count Rumford, in eſtimating the value of the different ingredients employed in the preparation of this ſoup, ſeems to place the chief dependence on the barley: Any of the other ingredients might be occaſionally changed, or even omitted altogether, without much injuring the ſoup; but for the barley, he never could find any ſubſtitute. And he is of opinion, that no other grain whatever will thicken and change to the conſiſtence of a jelly, ſo large a proportion of water, as barley, or barley-meal, (for he found this laſt, on trial, to anſwer the purpoſe equally well with pearl-barley); this he even carries ſo far as to alledge, on eſtimating their comparative nutritiouſneſs together, when uſed for ſoups, that barley-meal is at leaſt three or four times more nutritious than wheaten flour.

I have conceived, as well as the Count, a very favourable opinion of the nutritive qualities of barley, and think the frequent employment of it in broths and ſoups highly advantageous and proper. I muſt confeſs, however, that it does not appear to me to poſſeſs ſuch advantages over ſome of the other

other grains as the Count ſeems to think; and I am inclined to believe, that ſome of the other grains may be uſed nearly in the ſame way, with equal, or perhaps even with greater, advantage. This, I think, is particularly the caſe with rice; and I have found, that a ſmaller quantity of this grain, when properly boiled, thickened a larger quantity of water, or converted it to the conſiſtence of a jelly, than any barley, or indeed any other grain I have hitherto tried. Oat-meal, too, I believe, poſſeſſes the ſame qualities, and nearly in the ſame degree; for I find five or ſix ounces of this grain, well boiled, with a proper quantity of water, will afford as pleaſant and ſubſtantial a meal, with a little milk, as three times the ſame quantity when baked into bread. As to wheaten flour, I cannot ſay whether it can be uſed in any of theſe ways with equal advantage, without ſuch additions at leaſt as would render it too expenſive for common uſe, having never made any conſiderable trials with it hitherto. Indian flour, however, from the experiments of Count Rumford, would appear to be preferable to any of the grains hitherto taken notice of, either when made into a haſty-pudding with water, like oat-meal, or when made into a bag-pudding with treacle.

From theſe facts, which appear to me unqueſtionable, ſome very important concluſions, in my opinion, reſult. In the *firſt* place, it appears, that bread, though it be the moſt common form in which the farinacea in general are uſed, is certainly, ſo far as we yet know, the moſt expenſive, and the leaſt advantageous; that with regard to oat-meal and barley-meal in particular, three times the quantity of either made into bread, will not afford, with the ſame additions, or at the ſame expence, ſo comfortable, or ſo ſubſtantial a meal,

as *one third* made into pottage or ſoup. It would appear likewiſe, in the *ſecond* place, that this does not depend on any thing peculiar in the barley, as has been alledged, or in the oats, but rather on the mode of preparation, particularly the quantity of water with which they are combined; as other grain, for inſtance, rice and Indian corn, prepared in a ſimilar manner, poſſeſs the ſame advantages. From all which, one very obvious inference may be drawn, that thoſe grains which can be employed ſo advantageouſly in ſoups or pottage, as oats, barley, rice, &c. ought never to be made into bread; but if bread muſt be uſed, (though it be, unqueſtionably, the leaſt œconomical mode of uſing grain), it ſhould rather be made from wheaten flour, which not only gives a more perfect bread, but, ſo far as we hitherto know, cannot be employed to ſo much advantage in the form of ſoup or pottage.

Oat-meal, therefore, ſhould be uſed ſolely for the purpoſe of making pottage, which is both a very wholeſome and a very nouriſhing diſh; it requires leſs addition to render it palatable, (a little milk being ſufficient for this purpoſe), than perhaps any other preparation of this grain; for theſe reaſons, it ought unqueſtionably to be preferred. Another, and perhaps the moſt important reaſon is, that when uſed in this way, it will go at leaſt three times as far as when baked into bread. Beſide theſe modes of uſing this grain, it is likewiſe, particularly in the highland parts of Scotland, and ſome of the northern countries of Europe, as Ruſſia, made into *grits*, or, as we call it in this country, *grots*; a preparation nearly ſimilar to our barley, and uſed for the ſame purpoſe, for making broth.

broth. In this way, too, I have no doubt of its being uſed to much more advantage than when baked into bread, though I cannot ſay whether it be equal in this reſpect to barley, having never had a proper opportunity of comparing the effects of the two together.

Barley.—We have already had occaſion to notice the nutritious qualities of this grain when uſed in ſoup or broth, either under the form of pearl-barley or barley-meal; and though we do not rate its qualities in this reſpect ſo high as Count Rumford does, we yet value them ſufficiently to think that this grain ought never to be uſed in any other way. One curious circumſtance reſpecting the uſe of barley-meal in ſoup, deſerves to be noticed: It has been found, that barley-meal, with all the bran in it, made the ſoup richer and better than when the fine flour of barley alone was uſed. This certainly deſerves attention in the preparation of barley-meal for ſoup.

This being one of thoſe grains that may be uſed to moſt advantage in the making of ſoups or broths, ought certainly, in my opinion, never to be made into bread. To uſe it in this way is a certain loſs of at leaſt *two parts* in *three*, compared with the method of uſing it in broth or ſoup. Unfortunately, however, the preparation of bread is neither the only, nor the leaſt œconomical mode, in which this grain is employed. By far the greater part of what is produced in this country has, for ſeveral years, been employed in our diſtilleries and breweries. Theſe are not merely unthrifty and extravagant preparations of this grain; they are, eſpecially the firſt, not leſs injurious to the health than the morals of the community, particularly of the lower claſſes.

So far as ſpirits may be either uſeful or neceſſary, I believe we cannot have one that is preferable to a genuine malt-ſpirit, properly prepared, and kept for due length of time. But it certainly were "devoutly to be wiſhed," that the duties on ſpirits at all times were ſuch as not only to prevent too great a proportion of ſo uſeful a grain as barley being employed in this way, but ſuch, as putting them in general beyond the reach of the lower claſſes, would ſecure in ſome meaſure their health, as well as their morals, by keeping them out of the way of temptation. The other form under which this grain is chiefly employed, that of ale or porter, is certainly not quite ſo objectionable as that of ſpirits. As containing more nouriſhment, it is more uſeful, as well as œconomical; and, what is of ſtill more importance, it is not nearly ſo intoxicating, and therefore leſs apt to injure either the mind or the body. Its *occaſional uſe* ſhould therefore, in my opinion, rather be encouraged than repreſſed, that if poſſible it might ſuperſede altogether the uſe of ſpirits. Any thing farther than this, however, would certainly be hurtful, as it muſt always be too expenſive for the *common uſe* of the labouring people; nor is it either ſo wholeſome or ſo nouriſhing as thoſe other preparations of this grain which we have before noticed, as broths, ſoups, &c.

Pulſe, peas, and beans.—Theſe, in general, afford a farinaceous matter, ſimilar to that of the other claſſes which we have juſt been conſidering. The farina of peas and beans, as containing a larger proportion of oil, has been ſuppoſed to be more nutritious than the other *farinacea;* and as a proof of this, it is alledged, that labourers who have been accuſtomed to live on bread made of

pea

pea or bean-meal, have felt a decay of their ſtrength on being obliged to live on oaten or barley bread. I am not quite certain whether this obſervation be altogether correct or not. I know, indeed, it is cuſtomary with ſome farmers in this country, who keep a great number of ſervants, to feed them, at leaſt partly, on a bread made of *barley*, or rather *bear-meal* and peas mixed. The farmer's reaſon, however, for uſing this kind of bread, is unqueſtionably its greater cheapneſs; and the ſervants themſelves, ſo far as I have had any opportunity of knowing, (and I have repeatedly been in parts of the country where this bread was employed, at leaſt occaſionally), inſtead of preferring this kind of bread, as is alledged, to every other, have always appeared rather averſe to its uſe, and in general preferred oaten bread to this mixed bread, when the alternative was in their offer. As for wheaten bread, it was not within their choice.

After all this, however, when barley is to be employed ſo unprofitably as in baking it into bread, a little bean or pea-meal may be a very uſeful addition. Barley-bread is very light, and eaſy of digeſtion; and as it remains but a ſhort while on the ſtomach, is certainly not well adapted to ſupport the ſtrength of labour. Pea-meal, on the contrary, makes a heavy ſolid bread, more difficult of digeſtion, which of courſe remains longer on the ſtomach: It is probable, too, that from containing a larger proportion of oil, it may be more nutritious than barley. On all theſe accounts, therefore, where barley is to be made into bread, pea-meal may make a proper and a very important addition. But a much more profitable mode of uſing peas and beans is certainly in the preparation of ſoups or broths. I have already had

had occaſion to take notice of their employment in this way, with an equal quantity of barley, by Count Rumford, in the ſoups formerly mentioned. This is, no doubt, a very advantageous way of uſing peas. They may be uſed, however, with nearly the ſame advantage in preparing ſoup by themſelves; only they require a great deal of boiling to make them thicken the ſoup properly. The beſt way of uſing them in this caſe, is, after putting them in the water, to ſet them by the fire-ſide the night before the ſoup is to be uſed. In this way, very excellent ſoup may be made, without any other addition but a little bit of carrot to flavour it;—ſplit peas anſwer beſt for this purpoſe. Perhaps they might anſwer ſtill better for making ſoup under the form of meal or flour, as in this way they would be more readily diſſolved, and would certainly require much leſs boiling. Under one or other of the forms juſt mentioned, either made into broth or ſoup, peas may unqueſtionably be employed to infinitely greater advantage than when baked into bread. Nor is this all; they are likewiſe greatly lighter, and more eaſy of digeſtion. Pea-meal, eſpecially when uſed by itſelf, though it may afford a bread that is ſufficiently nouriſhing, certainly gives one that is very heavy, and, except to people of robuſt conſtitutions, not very eaſily digeſted. It is likewiſe noted for producing flatulence and other complaints in the bowels. When properly boiled, however, either into ſoup or broth, they are digeſted with equal eaſe, and with as little inconvenience, as any of the other grains; this ſhould, therefore, be an additional reaſon for uſing them in this way.

Beſide being uſed for the purpoſes juſt mentioned, when they are always employed in a ma-

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ture and ripe ſtate, they are not unfrequently uſed at table in their unripe or green ſtate. In this way they are certainly more tender and eaſy of digeſtion; but, on the other hand, they do not afford nearly the ſame nouriſhment. Peas-pudding is likewiſe another way in which this grain is frequently employed. As they are uſed in this preparation in their moſt perfect and mature ſtate, they certainly afford a great proportion of nouriſhment; but then it is at the hazard of producing flatulence, and the other ſymptoms of indigeſtion that commonly attend the uſe of pea-bread. From the complete boiling which they undergo, however, in this proceſs, I ſhould judge them to afford a larger proportion of nouriſhment than the ſame quantity baked into bread. Their uſe in this way, then, I ſhould conſider as preferable, in point of œconomy, to their employment in bread; and in reſpect of the facility of their digeſtion, I conceive it at leaſt equal, as their complete boiling in this caſe is certainly a full equivalent to their minute diviſion in the other.

The potatoe.—Though this ſubſtance be of a very different ſpecies, either from the pulſe laſt noticed, or from the various kinds of bread-corn, yet, as containing a large proportion of farina, which is now very generally uſed as an alimentary matter, it may not improperly, I apprehend, find a place here, where attention to claſſical arrangement is, at any rate, but a very inferior and ſecondary object. This, as is well known, is the root of a particular plant, the *ſolanum tuberoſum*. Though potatoes contain a large portion of water in proportion to their bulk, they are yet found to be a very nouriſhing food both to man and other animals. If they be not equal in this reſpect to the different

ent ſpecies of corn or pulſe, they at leaſt probably rank next after them in the ſcale of nutrient vegetables; and in eſtimating their comparative nutritious qualities among themſelves, I would conſider thoſe that are leaſt watery, or the moſt mealy, as we commonly ſpeak, as the moſt nutritious. Whilſt potatoes are thus ſufficiently nouriſhing, they are at the ſame time very wholeſome, and in general of eaſy digeſtion.

Potatoes in general poſſeſs many advantages over moſt of the other farinacea that are cultivated for the uſe of man, both in reſpect of the quantity of their product, the facility of their culture, and likewiſe the means employed in preparing them for food. None of the other farinacea afford, from the ſame quantity of ground, near the ſame quantity of product as the potatoes. Beſide being more plentiful, potatoes are in general a ſurer crop than moſt of the other farinacea, as they ſeldom fail, if properly managed; and they are eaſily got in, even when the weather proves unfavourable to the taking in of moſt of the other crops. But what above every thing elſe renders them invaluable to the poor, is, that they require no previous preparation, either of grinding or baking, to convert them into a wholeſome and palatable food. For this purpoſe, all that is neceſſary is merely a little boiling, when they may be ate perfectly well, without any thing but a little ſalt. In this way they form a very pleaſant, and certainly a very cheap, ſubſtitute for bread: and it is perhaps the beſt way of preparing them, when they are to be uſed along with animal food, or with any thing elſe, inſtead of bread. When they are to be uſed, however, for a meal by themſelves, they may certainly, with ſome little additions, and without any great expence,

pence, be rendered both more palatable and more nouriſhing. One of the ſimpleſt, and perhaps one of the beſt ways of preparing them, is, firſt to ſcrape, and then boil them, taking care not to boil them too much; then, after pouring off the water carefully, to beat them well. A little milk and butter muſt now be added, and they muſt be briſkly ſtirred about with a ſtick, till they become beautiful and white. When well prepared in this manner, they make truly a nice diſh; they may be ate either alone or with a little milk. Potatoes likewiſe make an excellent ſoup, when well boiled, with the addition of a little cold meat, and an onion or two to ſeaſon them. They make an excellent ſtew, too, with a bit of powdered meat; and they make an excellent diſh when done under a roaſt. In ſhort, to all their other advantages, potatoes poſſeſs this additional property, that perhaps no other vegetable admits of being dreſſed in ſuch a variety of ways, to ſuit either the taſte or the circumſtances of individuals.

Notwithſtanding of all theſe different ways of dreſſing potatoes, which are in general ſufficiently known, it has been propoſed, after all, to bake them into bread; as if "man, literally, could live on bread alone." I have already objected ſo ſtrongly to the general uſe of the other farinacea under this form, that I think it unneceſſary to repeat here what has already been ſaid on the ſubject. I would only obſerve, that potatoes, perhaps of all other vegetables, ſtand the leaſt in need of a proceſs of this kind, either for the purpoſe of utility, or even for the ſake of variety, as potatoes, from their ſize and form, can be uſed more conveniently inſtead of bread than almoſt any other vegetable; and no other, as has been obſerved already, admits of ſo many other modes

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of cookery. Beſide their being a wholeſome, nutritious food, potatoes are in general, from the ſoftneſs of their texture, ſufficiently light and eaſy of digeſtion; ſo that no other vegetable we are acquainted with in this country poſſeſſes ſo many advantages, or is ſubject to ſo few inconveniences, as this valuable root. Whether we conſider it, therefore, in a national or a political view, as affording, from the largeneſs of its produce, and the certainty of the crop, the means of general plenty and of ſubſiſtence, or in a more limited and private capacity, as affording to individuals at once a cheap and moſt agreeable food, in every point of view, too much attention cannot be beſtowed on the more general cultivation of this valuable vegetable; nor can its more general uſe be too warmly recommended.

Beſide theſe farinaceous ſubſtances, the produce of this country, ſome others that are not indigenous may deſerve to be noticed, on account of the very conſiderable nutritious qualities they poſſeſs, and from their being in general to be had at a moderate price. Of theſe I ſhall mention only two that I conſider as the moſt valuable, *rice* and *Indian corn*. Though *rice* has been long known, and occaſionally employed as an article of food in this country, yet its uſe has, in my opinion, never become ſo general as either the nutritious qualities of this ſubſtance, or the eaſy price at which it may commonly be purchaſed, ſeem to point out. This leads me to obſerve, that in the article of diet, as in every thing elſe, nations, as well as individuals, are more governed by habit, and often by caprice, than by any regular and fixed principles. It is not ſo much what is actually beſt in itſelf, but what is moſt generally practiſed, that is the univerſal object of inquiry, as well as imitation; and

and ſo long as the beaten track continues at all paſſable, people ſeldom think of looking out either for a better or a ſhorter. It is only when danger threatens, or difficulties obſtruct our uſual progreſs, that we begin to look for a ſafer and more practicable rout. This is uſually the moment of diſcovery and of improvement; and the late ſcarcity and dearth of all the neceſſaries of life, though a ſore evil for the time, may perhaps eſſentially contribute in this way to the permanent benefit and advantage of the community, either by introducing new and uſeful articles of diet, or by diſcovering more thrifty and beneficial modes of preparing thoſe already known.

From this cauſe, the introduction of rice, as an article of diet, has certainly become much more general of late, than at any former period, though perhaps ſtill not ſo general as from its beneficial qualities it deſerves. Rice is on many accounts a very valuable article of diet. It may commonly be had at a moderate rate, uſually as cheap, if not cheaper, than many other kinds of grain the produce of the country. Even at this moment, when it is about twice the uſual price, it is ſtill conſiderably cheaper than oat-meal, though, in my opinion, both a more nutritious, as well as a more palatable food. Like this, too, it poſſeſſes the advantage of being eaſily prepared, and requires but little addition to render it a pleaſant food. All that is neceſſary for this purpoſe, is to boil it well, with a little ſalt and water, and then to add to it a little milk and ſugar. The manner, however, as well as the degree of this boiling, is of much more importance, both in reſpect of œconomy and taſte, than is commonly imagined. The uſual way is to boil rice with a large quantity of water, till it be ſoft, or till it ſwell, and then to pour off this

this water, and to add a quantity of milk and ſugar. In this way, I will venture to ſay, that ſcarcely one half of the nouriſhment, perhaps, is obtained from the price, that might be procured by a different management; nor is it by many degrees ſo rich and ſubſtantial a diſh. Rice, to be properly managed, ſhould be ſuffered to boil, or rather to ſimmer, over a gentle fire for two hours at leaſt; and inſtead of being boiled with a large quantity of water, which is to be afterwards thrown away, (by which a great part of the nouriſhment contained in the rice is loſt), ſhould juſt be ſtewed with as much water merely as is ſufficient to prevent it from burning, (with more to be added occaſionally as it evaporates); and this water, which, by the time the rice is properly prepared, is converted into a perfect jelly, will in a great meaſure ſupply the place of milk, or at leaſt will render a much ſmaller quantity of this article neceſſary to bring the rice to a proper conſiſtence. Beſide the milk, rice likewiſe requires the addition of a little ſugar, to take off the otherwiſe inſipid taſte of this ſubſtance.

Prepared in this way, rice is not only a very nouriſhing and agreeable food, but I believe it to be more thrifty and œconomical than almoſt any of the other grains at preſent in uſe in this country. I have already obſerved, that it is at preſent conſiderably cheaper than oat-meal, while it is, in my opinion, likewiſe more nutritious than this ſubſtance, even when made into pottage, the moſt œconomical form, by much, in which oat-meal can be employed. Count Rumford indeed alledges that barley is more nutritious than rice, and ſays, that he never could find any other grain whatever that would thicken ſo large a proportion of water, or convert it to a jelly, as barley did.

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From any comparative trials, however, that I have made with theſe two ſubſtances, I would be inclined to think rice the moſt nutritious of the two, even on the Count's own principles, as I have always found, that when equal quantities were uſed, the rice always thickened, or converted into a jelly, a larger portion of water, than the barley. My barley may not indeed have been ſo good as that uſed by the Count, as that grain is in general very bad this ſeaſon; it was, however, as good as I could find, and nearly of the ſame price with the rice, which at any rate rendered the experiment fair enough. Compared with wheaten bread, I would conſider the nutritious qualities of rice as in the proportion of at leaſt three to one, that is, that five ounces of rice, properly prepared, are fully equivalent, in point of nutrition, to fifteen ounces of wheaten bread, with the ſame additions, or with an equal expence. Now, when it is conſidered that wheaten bread is at this moment very nearly of the ſame price with rice, that is, wheaten bread coſts nearly fourpence a pound, and rice about fourpence or a little more, this places the difference in reſpect of nutrition in a very ſtrong point of view.

Beſide being uſed in the way juſt mentioned, with milk and ſugar, rice may be employed to nearly equal advantage, inſtead of barley, either in ſoups or broths. Like this, however, it requires a great deal of boiling, to obtain from it all the nouriſhment it is capable of affording. It is likewiſe uſed, both whole and ground into flour, for the purpoſe of making puddings, and in this way is certainly much thriftier than wheaten flour, as an equal quantity of it will go much farther than flour, though the difference betwixt the two be not ſo great here as in ſome of the other modes of preparation.

Indian Corn. This grain has hitherto been but little uſed in this country, though it has for a long time paſt been in the moſt common uſe of any of the farinacea over a great part of the continent of America. From the general experience reſpecting it in that country, not only in feeding man, but likewiſe other animals, as well as from ſome experiments made with it here by Count Rumford, this grain appears to be highly nutritious, and the culture of it extremely advantageous. Indian corn is in general a very productive crop, and therefore may commonly be had at a very moderate rate. In moſt parts of America where the two are cvltivated, Indian corn may uſually be had at about one half of the price that is paid for wheat; and even in this country it may be had for about one half of the price of wheat, and indeed at a much lower rate than any of the different kinds of bread-corn that are in moſt common uſe in this country. Count Rumford goes ſo far as to reckon Indian corn the cheapeſt, as well as the moſt nutritious, of all grain. He thinks it may be furniſhed in this country in common years at about one penny the pound. But even calculating it on an average at three half-pence, this would ſtill be cheaper than almoſt any of the ſpecies of bread-corn, the produce of this country, and ſcarcely one half the price of wheaten flour. The highly nutritious qualities of this grain have long been aſcertained in America and the Weſt Indies, where the negroes prefer it, in this reſpect, even to rice itſelf, which is certainly one of the moſt nutritious grains with which we are acquainted. Taking it at twopence the pound, the very high price which it gave at London in November 1795, Count Rumford found that he could make a hearty and comfortable meal, (and that meal his dinner too), on a pudding prepared of this grain, for

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ſomewhat leſs than one penny-farthing, ſauce and every thing included.

On all theſe accounts, therefore, this grain certainly well deſerves farther attention. And ſhould the climate and ſoil be found unfavourable to its cultivation in this country, at leaſt its importation, both in a commercial and political view, unqueſtionably merits every encouragement.

The beſt and moſt œconomical methods of preparing this grain, according to Count Rumford, is either in the form of a haſty pudding, made much in the ſame way with our oat-meal pottage, by ſetting a quantity of water, with a little ſalt in it, in a pan, over the fire, and then ſtirring in gradually the Indian meal, taking care to add the meal ſlowly, while the water is warming, and to ſtir it carefully, to prevent its being formed into lumps. The boiling is to be continued for half an hour or an hour, and as much of the meal to be added as to render the pudding ſufficiently firm to ſupport the wooden ſpoon, uſed for ſtirring it with, in a vertical poſition. This kind of pudding is either ate warm with a little milk, or with a ſauce compoſed of butter and molaſſes, or butter and brown ſugar. The pudding being ſpread out on a plat, the butter, with the molaſſes or ſugar, is put into an excavation formed in the centre, and each ſpoonful is dipped in this before it be put into the mouth.

For preparing a *plain Indian pudding*, the Count gives the following receipt:—*Three pounds of Indian meal* (from which the bran had been ſeparated by ſifting it in a common hair-ſieve) were put into a large bowl, and *five pints of boiling water* were put to it, and the whole well ſtirred together; *three quarters of a pound of molaſſes*, and *one ounce of ſalt*, were then added to it; and theſe being well mixed, by ſtirring them with the other

ingredients, the pudding was poured into a fit bag; and the bag being tied up, (an empty ſpace being left in the bag in tying it, equal to about one ſixth of its contents, for giving room to the pudding to ſwell), this pudding was put into a kettle of boiling water, and was boiled for ſix hours without interniſſion, the loſs of the water in the kettle by evaporation during this time being frequently replaced with boiling water from another kettle. This kind of pudding, which, according to the Count, is highy palatable, as well as nutritious, may be made for about two farthings the pound, and, together with the ſauce, about half an ounce of butter to the pound, coſts altogether only *three farthings* the *pound*. I ſhall ſuppoſe, however, that, in conſequence of the general advance of price on almoſt every article of ſubſiſtence in the preſent year, 1800, above 1795, when the Count wrote, this pudding might coſt *one*, or, which is certainly a large allowance, ſay *two thirds* more, that is, *one penny farthing* a *pound*; ſtill it would be one of the cheapeſt and moſt nutritive diſhes, as well, perhaps, as one of the moſt palatable, that could be procured for the ſame money, being, after all, ſcarcely *one third* of the price of common houſehold-bread, though certainly much more nutritious, as well as palatable.

OF THE COOKERY OF ALIMENT, PARTICULARLY OF VEGETABLES.

THE importance of this part of our ſubject muſt, I think, be ſufficiently obvious from the experiments and obſervations on the preparations of the different kinds of grain that have juſt now been mentioned. To impreſs this, however, more forcibly on the mind, I ſhall here bring together ſom

ſome of the leading facts and obſervations, and then offer a few remarks by way of explanation.

Animal ſubſtances, as well as vegetables, are in general ſubjected to ſome degree of preparation before they be uſed for food by man. The object in both caſes ſeems chiefly to be, to render the ſubſtance more eaſy of digeſtion, by making it more tender and ſoluble, and, in ſome inſtances, to improve its taſte and flavour, either by the addition of certain principles to it, or by the ſubtraction from it of ſome of thoſe that were either diſagreeable or hurtful. For the attainment of this object, different culinary proceſſes have been invented by different nations, according to their degrees of refinement and civiliſation, and their progreſs in luxury. The proceſs moſt generally employed, conſiſts in the application of heat to the ſubſtance, either in a dry or a humid form, as in roaſting, boiling, &c. Animal ſubſtances in general require no other preparation than this to render them tender and nutritious. They are likewiſe frequently kept for ſome time before being uſed, (longer or ſhorter, according to the ſeaſon, and the kind of preparation they are meant to undergo), but which in general contributes to the ſame end, that of rendering them more tender and more eaſily ſoluble.

With regard to the preparation of food, it may be obſerved, that though animal food be more univerſally, than even vegetables, ſubjected either to the proceſs of roaſting or boiling, or ſome modification of theſe; yet this ſeems to be rather a matter of taſte than of neceſſity, as animal ſubſtances are in general more eaſily digeſted than vegetables; and other carnivorous animals, we obſerve, digeſt this food almoſt without any previous maſtication. But not only is the neceſſity

of this previous preparation of animal food leſs apparent, its utility, or the advantages derived from it in reſpect of nutrition, are likewiſe infinitely leſs. Animal ſubſtances in general are ſo ſoluble in the human ſtomach, that, I believe, we cannot contribute much to their nutritious qualities by any previous preparation we can give them, except perhaps it be the cartilaginous and membranous parts, which, from the firmneſs of their texture, being leſs ſoluble, may, by a complete boiling, or rather digeſtion, be rendered more nutritious. However much, therefore, theſe different preparations may improve the taſte, they add but little to the nutrition of animal ſubſtances; and in any other reſpect, I am ſatisfied it matters but little what particular preparation, or whether any at all, be employed. Upon this principle I would alledge, that a pound of meat, tolerably tender, will afford nearly the ſame quantity of nouriſhment, whether it be boiled, or roaſted, or ſtewed, or baked, provided only care be taken to loſe none of the juices.

I know indeed, that ſome of theſe proceſſes have been ſuppoſed much more œconomical than others, and that boiling in particular has been thought more thrifty than roaſting. This prejudice, however, is founded on an obvious miſtake; becauſe in boiling meat is commonly made into broth or ſoup, with the addition of ſome vegetables, which is uſually eaten along with the meat, and which muſt therefore ſerve to make this go farther. But then this depends upon the addition of the vegetables; and the ſame quantity of meat prepared differently, roaſted for inſtance, would afford as much nouriſhment, with the ſame quantity of vegetables. While I thus alledge, however, that the uſual quantity of nouriſhment to be derived from animal food is but little altered by the particular

particular preparation employed, (provided only it be made ſufficiently tender), I am very far from thinking that this is the caſe with vegetables: on the contrary, I am fully ſatisfied that their nutritious qualities depend in a great meaſure on the means employed in preparing them. It is on this account, therefore, or merely as an advantageous mode of uſing vegetables, that I conſider boiling as a thrifty mode of preparing meat, not as contributing to the nutritious qualities of the meat, though it certainly does ſo in a high degree to the vegetables employed. This leads me to the conſideration of the cookery of vegetables.

In the *firſt* place, it appears, that the nutritious powers of vegetables, particularly of the claſs of the farinacea, depend very much on the mode of preparing them. This muſt, I think, be ſufficiently evident from what has already been ſaid on that ſubject. We have ſeen that one third of ſome of theſe ſubſtances, prepared in a particular manner, will go as far, in point of nouriſhment, as three times the quantity of the ſame ſubſtance, prepared in a different manner. Nor does this property belong to one of the farinacea excluſively, as it might then be an exception merely from a general rule, but ſeems to be common to the whole, or at leaſt the greater part of them. As we have ſeen that barley, oats, rice, &c. when properly boiled, afford at leaſt about three times the quantity of nouriſhment they do when made into bread. One thing farther to be noticed here is, that this improvement of their nutritious qualities is in proportion to their more minute diviſion, or their more complete boiling.

In the *ſecond* place, vegetables in general are more difficult of ſolution than animal ſubſtances. This is proved by direct experiments on animals, like man, capable of digeſting both, either with-

in or without the body, as animal ſubſtances are found in both caſes more eaſily diſſolved than vegetables. The ſame thing may likewiſe be inferred from obſerving, that animals which live on vegetables are in general provided with more complex or more powerful organs for the digeſtion, as well as the maſtication and trituration, of their food, than ſuch as live ſolely on animal food. The more complete apparatus of teeth in graniverous animals in general, and the more complex mechaniſm of the ſtomach in ſome claſſes, as in the ruminant, or its more powerful mechaniſm in others, as in the gallinaceous, are proofs of this aſſertion.

In the *third* place, it would appear, that among thoſe vegetables that are commonly uſed for food by man, the farinaceous claſs in particular is the moſt difficult of ſolution. This fact I hold to be equally unqueſtionable with the laſt, though it may not in general be ſo obvious, as the moſt part of this claſs uſually undergo a more complete previous preparation before they be ſubmitted to digeſtion, than other vegetables, and therefore we have it leſs in our power to draw a compariſon between them. But even this more complex preparation of the farinacea, in general, is of itſelf ſufficient proof of their more difficult digeſtion. What other reaſon can we aſſign for the different troubleſome and expenſive proceſſes uſed in the preparation of barley, flour, bread, &c. but the more difficult digeſtion of theſe ſubſtances in their original ſtate, compared with ſome of our eſculent vegetables, or with our ripe fruits, which we commonly uſe without any preparation at all. With a view to explain theſe circumſtances, I ſhall offer a few obſervations on digeſtion in general with the mode in which the cookery of meat, particularly of vegetables, contributes to that proceſs.

Digeſtion;

Digeſtion, ſo far as we hitherto know, appears to be in a great meaſure a chemical proceſs. The gaſtric fluid ſeems to operate on vegetable and animal ſubſtances preſented to it, in conſequence of a tendency to combine with theſe ſubſtances, or from a chemical attraction. This attraction ſeems to differ in different animals, according as they are carnivorous, or frugivorous, or omnivorous. As the gaſtric fluid of the carnivorous has no attraction for vegetable matter, and, *vice verſa*, the gaſtric fluid of the frugivorous has none for animal matter; while the gaſtric fluid of the omnivorous, like man, acts on both, with this difference, however, that it combines more readily with animal than with vegetable matter. This greater facility of combination with animal than vegetable matter, may proceed from a ſtronger attraction between the former of theſe ſubſtances and the gaſtric fluid. But ſuppoſing the attraction in both caſes equal, the ſame thing would follow from the greater firmneſs of texture in vegetables in general, which, by affording a leſs free communication between them and the gaſtric fluid, would thus render their combination more difficult. This principle I ſhall explain a little more fully, as it not only accounts for the more difficult digeſtion of vegetables, but likewiſe for many of the culinary proceſſes employed in preparing them, and the utility of ſome of theſe above others.

The tendency that bodies have to combination is in general diſtinguiſhed by chemiſts by the name of *affinity*. This affinity may either be exerciſed between principles of the ſame nature, when it is called the *affinity of aggregation*, or between principles of a different nature, when it is called the affinity of compoſition. Having thus explained thoſe technical terms, which I was forced to employ, I would obſerve, in the *firſt* place, that the affinity

affinity of compoſition acts only between the *minute* or conſtituent principles of bodies. This, which is a general law in chemiſtry, regulating the effects of bodies in their actions upon one another, attains equally in the action of the gaſtric fluid, upon the different ſubſtances that are preſented to it. Hence it is, that bodies which, in their entire ſtate, are either not acted upon at all, or very ſlightly, by the gaſtric fluid, are yet, when properly divided, completely diſſolved, or rather digeſted; and this ſame principle ſerves to explain moſt of thoſe proceſſes, mechanical as well as culinary, to which our food, particularly the vegetable part of it, is commonly ſubjected.

In the *ſecond* place, it may be obſerved, that this *affinity of compoſition* is in the *inverſe ratio* of *the affinity of aggregation*. In other words, bodies enter into combination more readily in proportion to their more minute ſtate of diviſion. This principle, along with the former, of which this is merely a modification, ſerves to explain many of the phenomena of digeſtion, as well as to account, in my opinion, for ſome of thoſe ſingular facts, which we have already had occaſion to notice, reſpecting the effects produced by particular modes of preparation, upon the nutritious qualities of ſome vegetables.

In the *firſt* place, it explains many of the phenomina of digeſtion. The more difficult ſolution of *vegetable* than of *animal food*, and among *vegetables* the more difficult ſolution of the *farinacea*, theſe are ſatisfactorily accounted for, from the greater firmneſs of the texture of vegetables in general, and of the farinacea in particular. This ſame principle likewiſe explains the various means, artificial as well as natural, employed in the preparation of our food, before it be ſubjected to the action of the gaſtric fluid. The various contri-

vances

vances of nature, in the ſtructure of the teeth of granivorous animals in general, as well as in the particular ſtructure of the ſtomach in the *ruminant*, and in the *gallinaceous claſs*, are but ſo many means employed by her for the purpoſe of facilitating the digeſtion, and improving the nutrition of vegetable aliment, by ſoftening its texture, or diminiſhing its coheſion. Nor has the ingenuity of man been ſlow to improve upon this hint, in the various *mechanical* and *culinary* contrivances adapted to the ſame purpoſes. Grinding and all the different operations employed in the preparation of our bread-corn, are only the application of the ſame principle to a particular claſs of vegetables, where, from the particular firmneſs of their texture, it is more peculiarly requiſite. The various culinary proceſſes, which ſeem at firſt ſight contrived rather for the gratification of our palate, than either for the purpoſe of utility or œconomy, are in general referable, at leaſt the more ſimple of them, to the ſame principle. Cookery, in general, conſiſts in the application of heat to our aliment. Heat, as is well known, has a powerful effect in ſeparating the particles of bodies, and thus diminiſhing their force of coheſion, or deſtroying their texture. Hence the univerſal application of this ſubſtance in almoſt every operation of cookery. Beſides heat, we frequently employ *water*, in many of our culinary proceſſes. This is often merely to regulate the degree of heat employed, or to prevent the ſubſtance with which it is uſed from being burnt. Often, however, it is employed along with heat to procure a kind of *ſolution* of our food. This is frequently the caſe with animal as well as vegetable food, though, in our opinion, the proceſs is by no means equally advantageous in both. The reaſon is this, animal-food in general, (except the ligamentous and

and cartilaginous parts, which are therefore properly employed in the preparation of broths and ſoups,) diſſolves ſo readily and completely in the human ſtomach, that any previous operation ſcarcely facilitates the proceſs of its digeſtion, or increaſes the quantity of its nutriment. In paſſing through the human ſtomach and bowels, the whole of its nutriment is conſtantly extracted, ſo that this previous ſolution is only ſo much labour loſt. Not ſo with vegetables; theſe often paſs through entire and indigeſted, and, but for the different proceſſes employed in ſoftening their texture, and deſtroying their coheſion, would always, more or leſs, do ſo. Solution here, then, far from being a work of ſupererogation, is abſolutely neceſſary, if we wiſh to derive from them all the nutriment they contain.

On this principle, I would explain that aſtoniſhing difference, before noticed, in the quantity of nutriment, afforded by the ſame grain, when made into bread, or when properly boiled with water. The grain which is uſed for making bread, undergoes indeed, in the operation of grinding, a proceſs highly conducive to its digeſtion. But the heat which is afterwards applied to expel the moiſture, with a view to make the bread keep, is not employed in an advantageous form. Inſtead of ſoftening its texture, it ſerves rather to make the grain harder and firmer. In the operation of boiling, on the contrary, the heat is accompanied with a ſufficient quantity of water, to effect a ſolution of the body. The water in this caſe, aſſiſted in its action by the heat, at laſt completely deſtroys its texture and coheſion, and in a great meaſure diſſolves the body. *Solution*, then, is merely another phraſe for the *moſt minute diviſion* of a *body*, that art can accompliſh.

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As people who live in the country cannot always obtain medicines upon any ſudden emergency, even though they knew how to uſe them, we have here added a liſt of ſuch ſimple drugs and medicines, as ought to be kept, at leaſt in every gentleman's family, in order to be in readineſs upon all occaſions.

Rhubarb	Burgundy-pitch
Jalap	Agaric of the oak
Senna	Aſh-coloured ground Liver-wort
Manna	
Glauber's ſalts	Cinnamon-water
Cream of Tartar	Penny-royal water
Salt of Tartar	Peppermint-water
Tamarinds	Syrup of poppies
Ipecacuanha	——— of oranges
Jeſuits bark	——— of lemons
Nitre, or ſalt-petre	Spirits of wine
Sal. prunella,	——— of hartſhorn
Sal. ammoniac	Sweet ſpirits of nitre
Flowers of ſulphur	——— ——— of vitriol
Magneſia alba	Liquid laudanum
Crabs claws prepared	Elixir of vitriol
Snake-root	Vinegar of ſquills
Liquorice-root	Oil of almonds
Seneka-root	Olive-oil
Wild Valerian root	Adheſive plaſter
Gentian-root	Bliſtering plaſter
Gum-arabic	Wax plaſter
——— camphor	Yellow baſilicum ointment
——— ammoniac	White ointment
——— aſafœtida	Turner's cerate.

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